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A Tabloid of the Faculty of Medicine at the University of Toronto

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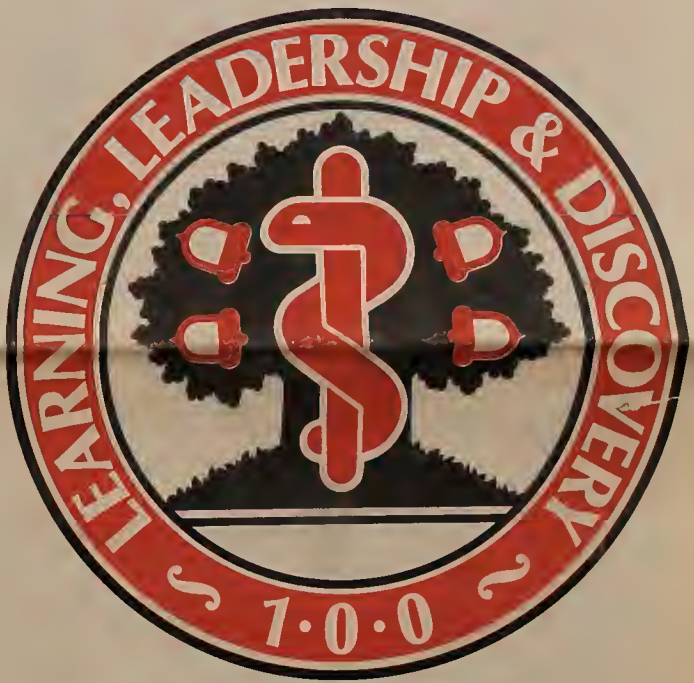

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100 Years of Medicine at the University of Toronto

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New Dean of Medicine Sets Goals for Faculty's Future

Developing the Faculty of Medicine's international reputation to its fullest potential is one of the major aspirations of the new Dean of Medicine, Dr. John Dirks.

The University of Toronto's Faculty of Medicine already has an excellent reputation and history, and is viewed as the premier medical school in Canada, he believes, and firmly establishing that reputation in the U.S. will be one of his administration's tasks.

Centenary: A Time to Remember Heritage

Dr. Dirks, who assumed the deanship in July, says he is delighted to have joined the Faculty in the year of its 100th anniversary of affiliation with the University of Toronto. In fact, one of the first items on his agenda was to strike a Centenary Planning Committee, which was given responsibility for creating a roster of anniversary events to involve all members of the Faculty's constituencies.

... he is delighted to have joined the Faculty in the year of its 100th anniversary of affiliation with the University ...

Chaired by Dr. Robert Volpé, of the Department of Medicine, the committee is composed of representatives from the various sectors of the Faculty. They include: Dr. Arnie Aberman, Associate Dean—Fiscal Affairs; Dr. Auble Angel, Director of the Institute of Medical Science; Dr. Mary Jane Ashley, Chair of the Department of Preventive Medicine and Biostatistics; Dr. William Callahan, Director of the Eye Research Institute of Ontario; Sherril Gelmon, Coordinator, Planning Directorate; Dona Harvey, Assistant Vice-President, Public Affairs; Dr. Martin Hollenberg, Associate Dean—Research; Dr. Ruth Kurdyak, Vice-President of the Medical Alumni Society; Dr. John Provan, Department of Surgery; Liivi Kask-Ruona, Director of Instructional Media Services; and Dr. Rose Shetnin, Vice-Dean, School of Graduate Studies.

The goal of celebrating the anniversary is, of course, to commemorate the joining of the Toronto School of Medicine with the University of Toronto. Yet, as Dr. Dirks points out, the anniversary also presents an opportunity for the Faculty to renew ties with its alumni, by involving them in the planning and the actual events.

"I think we should view this as a time to remember our history and tradition. This school has produced some of Canada's most outstanding physicians, and has continually attracted top-notch Faculty and students. We hope the alumni will come back and see what has happened since they sat on the benches of the various lecture rooms, and that they will feel a renewed sense of affiliation with the school," he says.

"... let the public know the significance of what we are doing now, and reinforce the Faculty's forward momentum."

He adds, "The centenary is also a time to let the public know the significance of what we are doing now, and to reinforce the Faculty's forward momentum by getting the message across that we are embarking on some even more breathtaking challenges for the future."

Setting Priorities for Development

Now, four months after arriving in Toronto, Dr. Dirks has had an opportunity to acquaint himself with the Faculty, and to assign priority for development in various areas.

"My goal is to take this strong, prestigious, complicated Faculty, and work to unify it to a greater degree."

"My goal is to take this strong, prestigious, complicated Faculty, and work to unify it to a greater degree," explains Dr. Dirks. "This involves many things, for instance, ensuring we run a good administrative organization which effectively deals with the 27 departments and the various units and institutes that are part of the overall framework."

He plans to implement a cohesive plan of development to address each sector in the Faculty, and adds that there will be a concerted effort to fulfill the potential inherent in certain areas of concentration.

"I think there is considerable opportunity for research development of the highest calibre. I am interested in furthering a number of areas of strength — most of which have already been identified — such as the outstanding work in cell and molecular biology," he says.

In the clinical departments, he feels there are innumerable areas of excellence, such as the Research Institute at the Hospital for Sick Children, cancer research at the Ontario Cancer Institute, diabetes research at Toronto General Hospital, and the Playfair Neuroscience Unit at the Toronto Western Hospital.

He feels that the teaching hospitals should be a "kind of last court of appeal for any significant patient problem."

"We have also selected several new ventures to enhance, among them a major virus research centre which stems not only from the urgent situation vis-à-vis the AIDS epidemic, but also from evidence that other viral diseases may be involved in a host of other diseases such as chronic brain disorders, particularly Alzheimer's disease." He adds, "It is clear from the AIDS epidemic that we, in Canada as a whole, were not sufficiently well prepared to deal with a changing biology and changing viral disease spectrum. A research centre like this will cut across departments and allow us to develop a fundamental understanding of these particular viruses, and ultimately to produce vaccines and treatments." He hopes that this will form part of the strategy to strengthen the basic sciences.

He says that there are a number of other proposals pending in areas relating to drugs and toxicology, biomedical engineering and community health.

Commitment to Community Health

Dr. Dirks is also commited to ensuring that the Faculty's Community Health sector develops provincial and national leadership in this area.

"I am pleased that the Faculty has undertaken its recent evaluation of the Community Health sector through the special task force. I believe Community Health programs are high on the public agenda. Certainly the present government of Ontario, through two major reports and through the Premier's recent announcements, has reinforced that the Faculty must provide research, education and practical modelling in its community health programs."

Enhancing Student Experience

Students — undergraduate,

from the dean

graduate and postgraduate — are also being given careful consideration. He feels that while the Faculty has done well with its major student obligation, it is time to examine the entire educational process. He already hopes to increase the scope and variety of post-graduate and graduate programs.

"I think considering the fact that U. of T. is three or four medical schools rolled into one, that it does very well on that front. I am surprised at how much *esprit de corps* there is among the students. The Orientation was spectacular, innovative and good fun."

"I am surprised at how much esprit de corps there is among the medical students."

Life Before Toronto

Prior to accepting the appointment as dean, Dr. Dirks was Eric W. Hamber Professor of Medicine at the University of British Columbia, and head of the Department of Medicine at the Vancouver General Hospital, positions he had held since 1976. More recently, he held the position of Head of the Department of Medicine at U.B.C. Hospital.

He was born and educated in Winnipeg, obtaining both his B.Sc. and M.D. (Hon) from the University of Manitoba. He became a fellow of the Royal College of Physicians and Surgeons of Canada in 1963, and a fellow of the Royal Society of Canada in 1982.

From 1965-76, he was a member of the Department of Medicine at McGill University, and was made the Head of Nephrology at the Royal Victoria Hospital in Montreal. Dr. Dirks has published extensively in kidney research, and in 1985 received the medical award of the Kidney Foundation of Canada.

He is currently a member of the Council of the International Society of Nephrology, and was, until coming to Toronto, a director of the British Columbia Science Council. He also holds membership in the Research Committee of the Royal College of Physicians and Surgeons, the Gairdner Foundation Awards Medical Advisory Board, the Association of American Physicians and the American Society for Clinical Investigation. ■

tablet

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Faculty Planning Centennial Celebrations

It has been 100 years since the Toronto School of Medicine joined the University to become its Faculty of Medicine. Since the union, the school has seen thousands of medical students pass through its classrooms; been involved in dramatic advancements in medical research; and has assumed a highly respected position among Canadian medical faculties.

In this issue of TABLET you will read about some of the people who have been influential in the Faculty's development over the years. And, while this issue devotes a fair amount of space to the Faculty's history, there are also articles about people, research and events that are making a significant impact on the Faculty's future. As Dr. Dirks explained in the article on the facing page, the Faculty's anniversary is a time to review our history and tradition, as well as an opportunity to examine our future direction.

You will also read that Dean Dirks has invited representatives of the Faculty's various constituencies to participate in a Centenary Planning Committee. The Committee is responsible for developing a series of anniversary events to involve all members of the Faculty — most especially, the alumni.

As part of the celebrations, all members of the Faculty and its alumni and student groups are encouraged to participate in the major events planned for the weekend of June 2nd and 3rd, 1988.

In keeping with the goal of reviewing the school's history, and also examining its future, a series of seminars on various aspects of Faculty research will be presented during the two days. As well, a Special Convocation will be held on June 2nd, at which honorary degrees will be bestowed. The weekend will conclude with a Centenary Banquet at the Metro Toronto Convention Centre on June 3rd.

More details will follow in future issues of TABLET. ■

The theme "Learning, Leadership and Discovery, 100 years of Medicine at the University of Toronto" has been adopted for the Centennial, since these three ideas are a summation of both the faculty's history and its future direction.

100 Years of Medicine at the University of Toronto

The Institute of Biomedical Engineering Celebrates 25 Years

The Institute of Biomedical Engineering (IBME) at the University of Toronto is 25 this year. Celebrations at the Institute, to be held during the week of February 22-26, 1988, will be an opportunity for IBME to bring together not only the 75 people who teach at the Institute, but also its 66 students and alumni.

"We are diffused," says Dr. Michael Joy, the IBME's Associate Director. "On a given day you might see five staff wandering the halls and you wonder where the other people are that you hear about but rarely see. Well, they are all busy working in their labs at the university or in hospitals and they pass through the Rosebrugh building every so often."

The diffusion results partly from the nature of interdisciplinary studies. Professors and students bring theoretical concepts together with day-to-day experience of the health care delivery system. They work in hospitals throughout the city, at the Hugh MacMillan Medical Centre and in the Institute's University base in the Rosebrugh building.

The foundation and strength of the IBME lies in successful partnerships between engineers and medical researchers. "The tradition is that we have a director and an associate director. One is an engineer and one is from the medical side. In the beginning, Norman Moody was the director and Edward Llewellyn-Thomas was the associate director."

says Dr. Walter Zingg, who became the Institute's director in 1985.

Toronto's Institute of Biomedical Engineering now has the largest number of faculty and offers the widest range of programs in biomedical engineering in Canada. Yet, the University of Saskatchewan and McGill University both offered courses before the IBME was founded in 1962. Dr. Norman Moody moved from Saskatchewan that year to become the Toronto Institute's first director. Dr. Llewellyn-Thomas came from McGill, where he worked with Dr. Wilder Penfield, the famous Montreal neurosurgeon. Together, these men directed a pioneering institute in a very young hybrid science.

"At first, it was called the Institute of Biomedical Electronics. It was strictly the application of electrical engineering to medical instrumentation. At the beginning of the sixties, the Faculty of Medicine and the Faculty of Applied Science and Engineering realized that it would be useful to create an institute which belonged to both faculties. The knowledge of engineering could be applied to questions in biology and medicine. The mandate soon grew to take in mechanical, chemical and all other engineering specialties, and the name was changed to the Institute of Biomedical Engineering," explains Dr. Zingg.

"Biomedical Engineering is a hybrid, the offspring of two dynamic, man-centered, science-based professions, Medicine and Engineering."

In a lecture on September 26, 1973, to commemorate the centennial of the founding of the Faculty of Applied Science and Engineering, Dr. Llewellyn-Thomas told his audience, "Biomedical Engineering is a hybrid, the offspring of two dynamic man-centered science-based professions, Medicine and Engineering. It is one among many hybrids of varied ancestry which have been springing up in universities during the last few years as the mature, well-established disciplines have been cross-fertilizing each other with the discreet exuberance of elderly professors who have just discovered that intercourse can be enjoyable as well as productive."

Responsive to the Need for Specialization

Biomedical Engineering grew out of the increasing need for specialization. Experts have had to rely on and defer to each other more and more. While this may have been difficult — a matter of pride — for some, most now find it rewarding.

"A lot has changed over the last 25 years," says Dr.

Richard Cobbold, who joined the Institute in 1966. "There has been a change in attitude. Specifically, twenty years ago, many physicians felt that they were at the pinnacle of human endeavor. Now, I think that most recognize limitations and that to pursue interdisciplinary research they must have a colleague who is an expert in their area."

Like any group of scholars pursuing a new branch of knowledge, engineers and physicians have done considerable soul-searching over the years about the role of biomedical engineering within the university community, the health care system and industry. In recent years, the IBME has established new programs to accommodate changing needs.

In 1984, a Clinical Engineering Program was established in the wake of a report by the Ontario Ministry of Health which identified a need for clinical engineers. The program, partially funded by the Ministry of Health, educates students to function within the health-care environment. They are trained in maintenance, safety and the selection of medical equipment for purchase. "We take five students a year into a very structured program with lectures and internships. We just graduated our first students with a Master of Health Science last year," says Dr. Zingg.

The Clinical Engineering program satisfies a specific health-care need. But, the main purpose of the Institute remains the training of students in biomedical research.

Encouraging Industry Liaison

Research is not only time consuming, but costly, and scholars throughout the University are experiencing difficulties with funding. The IBME is no exception. "New provincial money will help the Institute in the future. But in the present, we're dealing with a not insignificant budget cut for an institute our size," says Dr. Joy. "Like all small institutes, the IBME is at a critical stage because money is tight."

However, Dr. Joy says the IMBE has been well treated and protected by the Faculties of Applied Science and Engineering and Medicine. But, "as equipment budgets become a thing of the past, new equipment must come out of research grants. We are relying more on liaisons with industry and research grants to keep the Institute going."

Since Dr. Zingg became director, grant money has increased and he has found his efforts to facilitate research challenging. "While recent liaisons with industry and research grants have helped to inspire new and creative research," says Dr. Zingg, "getting industry involved often excludes the possibility of government support.

"There is a lot of talk now that universities should work closer with industry and I completely agree with that. The Natural Science and Engineering Research Council (NSERC), the Medical Research Council (MRC) and the Ministry of Trade have programs to support cooperative projects between universities and industry. I have had a number of discussions at both the provincial and federal level and I have tried to point out that, in the biomedical field, government assistance does not work because there is no biomedical industry in Canada. Our mandate is to create industry rather than to work with industry and there are no programs to do that," says Dr. Zingg. As a result, important work-in-progress at the Institute has industry sup-

port from outside Canada, especially from American-based companies.

Dr. Zingg believes everyone, including the patient, benefits when universities develop medical technology. "In the past, a lot of equipment has been developed by industry, but I think it's a good idea for universities to get involved." He explains that Prof. Alfred Dufan's job as Assistant Director of Industry Liaison is partly public relations because "industry does not know what we can do."

Dr. Cobbold agrees. "I am a strong believer that universities should by and large concentrate on fundamentals while industry can usually do the applied side better," he says. "The role of industry is to make devices. Graduate students learn to approach a problem from a fundamental point of view, while people in industry will make it into something without necessarily understanding how it works."

Dr. Cobbold speaks from experience. For 15 years, he has been researching the fundamental mechanisms of transducers, which convert physical data such as pressure or temperature into electrical current. "We've been spending most of our time trying to understand the fundamental mechanisms, rather than making devices," he explains.

"In the last five or six years, we have been able to develop very small transducers very cheaply using the same technology used for integrated circuits. The impact of integrated circuits on sensor technology has been rapid. Sensors provide the 'eyes' which enable us to see how things are operating — 'eyes' in a electrical sense because they convert physical data into an electrical signal which can then be processed in a computer or microprocessor."

There are many medical and non-medical applications of this technology in industry. But incomplete understanding of the fundamental operating mechanisms has created difficulty in developing the technology for commercial use. That fundamental understanding, says Dr. Cobbold, is where universities come in. But to a large extent, industry has not taken advantage of university-funded expertise.

The Institute currently has three industry-cooperative projects underway, supported by grants from the federal and provincial governments. One of the projects was originated by Dr. Llewellyn-Thomas, who developed the first equipment for measuring eye motion.

A few years ago, his project took an unexpected turn when Canadian Aviation Electronics (a company that makes flight simulators), expressed an interest. Dr. Richard Frecker and Dr. Moshe Eizenman have taken his research further and are now developing devices for tracking eye motion, that are small and light enough to mount in a pilot's helmet. "They are trying to develop a method by which the area or landscape a pilot is looking at can be displayed in detail by a computer. The ordinary computer cannot handle a program which displays the whole horizon in complete detail. So, they have to figure out where the pilot is going to look in the next few milliseconds by tracking his eye movement," explains Dr. Zingg.

Dr. Zingg himself has a University Research Incentive grant from the Ontario Ministry of Trade. He is working with Pentotech, a Canadian distributor of endoscopes. Biomedical engineering is largely concerned with developing non-invasive techniques for diagnosis. Dr. Zingg's is one such project. He is using fibre optics to develop an endoscope which will enable doctors to see around curves and into currently inaccessible areas.

One research project which has brought international attention to the IBME is that of Dr. Richard Cobbold and Dr. Wayne Johnston. For 12 years, they have been working together on Doppler Ultrasound. Like others at the IBME, their partnership began informally when a student casually mentioned Dr. Cobbold's research to Dr. Johnston over lunch.

Doppler Ultrasound is effective in assessing arterial disease using the Doppler effect, or, the change in frequency which results when an ultrasound wave returns after being sent into a blood vessel. "When you send an ultrasound wave into a vessel, you might find it has shifted slightly in frequency content. That shift is of vital importance because the information contained is directly related to the velocity with which the blood is flowing. Blood flow is complicated. It pulsates and the velocity changes depending on how close it is to the vessel wall. There is a wide spectrum of frequency shifts. That information has to be analyzed and related to the normality or abnormality of a vessel," says Dr. Cobbold.

Drs. Cobbold and Johnston can now successfully assess moderate to severe arterial stenosis. Minor stenosis is a problem that has not yet been solved. Some day, Dr. Cobbold hopes to be able to detect disease at an earlier stage so that more can be done for the patient without surgical intervention. Early detection will also enable physicians to follow the effects of therapy.

Numbers of Women Increasing

Although the student body is very diverse, the majority of students entering the IBME come from electrical engineering and a small minority come from the Life Sciences. Over the years the number of women accepted to the IBME has increased to 25 percent. "Since most of our students come from engineering, increasing numbers of women in the institute reflect an increase in the number of female engineering students," says Dr. Joy.

In his anniversary lecture

in 1973, Dr. Llewellyn-Thomas said, "Society needs more women in every branch of engineering because, whether we like it or not, engineering is a major shaper of the human future, and to paraphrase Kenneth Boulding, 'nothing is more dangerous than the untrammelled male engineer.'"

While Dr. Sharon Abel is the only female faculty member, 15 of the 66 students are women. "The Institute has not consciously tried to attract women. But now when we go out to make a pitch for the institute we are more sensitive that we are talking to both men and women," says Dr. Joy. "I can not say we are making a special effort; I can not see how we would do it. We reflect the general attitude of the University."

Biomedical Engineering grew out of the increasing need for specialization. Experts have had to rely on and defer to each other more and more.

Historic Perspective Remembered

As the most senior member of the IBME's faculty, Professor Harry D'Belne is writing a short history of the Institute for the 25th anniversary. Among his research materials are the letters written to the first director, Dr. Norman Moody, to commemorate the 10th anniversary. They include a story of how Dr. Moody placated Old Maurice, 'the caretaker supreme' of the Rosebrugh Building. Former student Dr. Michael Albisser (now a member of the Departments of Medicine, Surgery and Electrical Engineering) tells how Old Maurice "was ranting and raving back and forth in front of the class giving a dissertation on his arch-enemy, someone who stalks about the Institute and deposits in every nook and cranny a bowl-full of mostly unburned pipe tobacco." As the story is told, Professor Moody appeared on the scene and "undaunted by the slightly irregular pre-lecture behaviour of his class, removed the pipe from his mouth and with practiced definess applied one neat blow of the bowl to his heel pocket. We are not completely sure that it was asbestos-lined, but so assumed because of the number of times he would forget to clear the pipe and place the whole smoking thing in that same pocket. His coat never did go up in smoke."

The reputation and visibility of the IBME has increased as members have matured and become better known around the world. The 25th anniversary is an opportunity to reflect on the relative success or failure of research projects at IBME. "It does not seem to me as if it has been 25 years," says Dr. Joy, who was among the first graduate students at the Institute and is now known for his work on the gamma ray camera and in nuclear magnetic resonance. "But I recently did some spring cleaning and I found my old lab books with all the victories and defeats in them. They were filled with Norman Moody's comments about the gamma ray camera as we made progress over the years. When you look back over your lab books and see the amount of time you spent going in the wrong direction before you find the right one, it is quite a revelation."

During the week of February 22-26, 1988, a West German visiting professor, Dr. Rau, will lecture. One day during the week will be alumni day, and the IBME is hoping to see and chat with many former graduates. As well, a trust fund has been set up to provide financial aid to students coming from other countries. Further details of anniversary events will follow in the Fall issue of TABLET.

Former Dean of Medicine Reviews Past Seven Years

In the past seven years, the University of Toronto's Health Sciences Complex has seen considerable change — hospitals joining forces, major research efforts launched, exciting scientific discoveries and successive budget restrictions.

*During this period, **Dr. Fred Lowy**, Dean of the Faculty of Medicine from 1980 to June of this year, was one of the most visible players in this changing environment. In the following interview conducted in May, he shares his impressions of how the Faculty has, and will continue, to evolve.*

When you were appointed Dean in 1980, what did you consider the major challenges facing the Faculty?

"When I became Dean, I felt there were six specific challenges facing the Faculty. First, the undergraduate medical curriculum needed to be thoroughly reviewed because it had been justly criticized. Second, the network of teaching hospitals needed to be strengthened with a specific focus on their relationship to the university and their commitment to education and research. The third priority was the recruitment of first-rate chairmen and directors to replace those whose terms had expired. Fourth, by 1980 the Faculty had had to deal with three years of successive budget cuts and all indications pointed to this trend continuing, demanding of us a strategic response. Fifth, the Faculty mission needed to be reassessed, with a new priorization of objectives and the development of strategies to reach these goals. And, finally, I felt the new organization of the Dean's Office administration, which was initiated in 1979, had to be consolidated.

Those were the specific concerns, but in general I felt the big challenge was to continue the process of moving the direction of this medical school from its historically provincial orientation to more ambitious national and international objectives. There had been a long tradition of considering this Faculty the premier medical school in Ontario with a primary mission of serving Ontario's medical needs. However, during the 60s, 70s and on into the 80s, it had become not only the largest school in Canada but, in many areas, the national leader as well. That brought accompanying responsibilities, yet our internal organization and recruiting patterns were not really geared to the new direction. I felt my major task was to continue and to accelerate the process of moving forward. Primarily, this involved encouraging the development of our research enterprise, while also maintaining the quality of teaching programs."

Why was the research sector given priority?

"Our primary purpose is to turn out superb health professionals, and, ultimately, to improve health care for the people of Canada.

"The two most important elements of a first class education institution are the quality of its teachers and the quality of its students."

How is this done? The two most important elements of a first-class educational institution are the quality of its teachers and the quality of its students. There is an obvious interaction between these. Good students are attracted by good teachers. Students, particularly at the graduate level, contribute tremendously to the intellectual climate.

What is it that attracts good teachers to medical schools? It is both the capacity to conduct research and the presence of other first-class people who are also involved in scholarship—including excellent students.

Research is the creation of new knowledge—the conquering of our frontier. That is what makes it challenging. And the brightest people need to be challenged. Good researchers are stimulating and in turn they stimulate good teachers. There is a spirit of inquiry that prevails in contrast to merely passing on what was known and thought to be true in the past. People who teach in a strong research atmosphere are also preparing students for what is going to be discovered tomorrow, and ultimately this has a positive effect on patient care at the hospital and clinic levels. Also, those people who are at the forefront of their fields are more apt to be able to make good use of discoveries from anywhere in the world.

A further reason for fostering research is that scholarship and the subsequent publication of results act to raise the profile of the university. The world at large will only know of the Toronto Medical School if we publish our results. The U. of T. as a whole does not have the international profile it deserves. We are not as good at 'tub-thumping' as many of our sister universities in other places.

However, even as you increase support research, there is also the obligation to ensure teaching does not fall behind. It is essential that people who are primarily good teachers do not get discouraged because, not being first class researchers, they do not receive the academic accolades of the investigators.

It is a matter of balance. When I first came on as Dean I felt the balance was upset in that research here (as compared, say, to McGill University) was underemphasized. Then in about 1985-86, it became clear that our attention had to shift to teaching. There is necessarily a constant to and fro of relative emphasis to maintain balance."

Are you satisfied with the results of your efforts?

"One of the most frustrating things in any job is that you never accomplish everything you hope to do. But, in fact, I feel a lot has been accomplished in seven years.

It has been possible to bring on excellent new people, even at a time of budgetary stringency, through better exploitation of other fund-raising opportunities outside the University. For example, in the five year period from 1981-1986 our academic F.T.E. numbers have risen from 858 to 875. During that time the University base budget was cut annually.

There has been a steep rise in the number of externally-funded research projects here. There has been a more than 60 percent-increase in the amount of external research funding this Faculty has attracted in the past seven years. Although an increasing amount of external funds for research is not the only measure of research success, it is one of the qualitative ones. I believe that the quality of research in our medical school is high.

dialogue

There have been a number of major developments in recent years—for example in the neurosciences, which I and a number of others felt was an underdeveloped area in Toronto. We have also established a Department of Immunology for the first time, because this was another area that needed development. In the basic sciences there are now four major streams of research development, each with a number of separate departments cooperating in planning, recruiting and the sharing of resources.

Although it has been controversial, I have supported the establishment and growth of hospital-based research institutes. We, in the University, did not initiate the process, the hospitals did or, rather, our people wearing their hospital hats. I supported this effort because I am convinced that the net gain for the Faculty is there. I do agree that, in the short run, there are problems associated with the growth of hospital research institutes for campus based basic scientist teacher-investigators.

In terms of excellence in a medical school, you have to look at all aspects of its activity—not only basic science but also clinical teaching and practice and community health. With respect to the clincial area, I am convinced there has been substantial development.

With respect to community health, I feel much less sanguine about what has been accomplished. Excellent work in this area is done now but I wish I had been able to stimulate greater development here with greater impact on the rest of the Faculty.

In developing the clinical areas, the partnerships we have with the teaching hospitals are a crucial aspect. During the early years of my deanship, a lot of very good work was done in bringing the teaching hospital community and the University together, and a number of structures were established to facilitate this. A good atmosphere of collaboration existed. In more recent years, this has been put to the test by the tension that has developed from the hospital mergers. The Faculty did not have a grand plan for the development of the teaching hospitals; frankly, I had not seen this as our function. However, in retrospect, it would have been useful if we had had an academic development plan in the hospital sector that could have guided hospital development. The fact is that Toronto General and Toronto Western Hospitals took the merger step on their own initiative, and this had the effect, at least temporarily, of destabilizing the whole system. The other teaching hospitals became very concerned about the concentration of power within the Toronto Hospital Corporation, and a number of equally destabilizing counter moves have occurred in our Health Sciences Complex. Also some academic programs at the Toronto Hospital are going to be dramatically affected by the merger, and we were put in a reactive, catch-up position from which we are only now emerging. Nevertheless, positive things have resulted from the merger, and it is likely that the net effect in the long run will be favourable for the University and the community.

"Maintaining the integrity and coherence of our Health Science Complex will be a real challenge for the next few years."

The possible merger of other general hospitals and the relocation of The Princess Margaret Hospital have produced considerable turmoil as well. Within the last three years, therefore, the spirit of cooperation that exists in our network has been tested severely. Maintaining the integrity and coherence of our Health Science Complex will be a real challenge for the next few years."

What will be the priorities in the next decade?

"I think the Provostial Review quite accurately challenged us to develop a much clearer set of priorities. This University, and especially this Faculty of Medicine, tries to do virtually everything. There is hardly an area even remotely related to health in which we are not involved and that is not a good thing when budgets are tight. While we do have considerable resources to call upon, we do not concentrate sufficiently on our areas of strength. At a time when shrinking becomes mandatory—reduction of staff, of students, of budget—it is necessary to focus more closely. Therefore the challenge of the next decade is going to be to decide whether to build on our strengths, and develop preferentially those programs that have the potential to be world leaders; or to attempt to continue to do everything and fill in the gaps in quality where they exist.

I predict that the focus will be on building our strengths. Now, what does that mean in practical terms? It means that not all of our basic science departments can be world leaders, but the Faculty can be in a few well selected theme areas. It means not every one of our teaching hospitals can be a national leader. We have 11 fully affiliated teaching hospitals—seven general and four specialty hospitals—and not every one of these can be fully supported in their attempt to achieve national or international stature. Indeed, the University may have to withdraw from some applications. How is that going to be decided? That will be a real challenge, and meeting it will require the utmost of wisdom, courage and perseverance."

How will these decisions be made?

"If we were operating in industry within the parameters of a hierarchical system, the decision would be made by a few people once they were satisfied they had the relevant information. However, in the collegial atmosphere of the University and its teaching hospitals these decisions can only be made after a long process of iterative and reiterative discussion.

Ultimately, there has to be a decision. I think the kind of approach outlined by President Connell in his Renewal Document is a valid guide for us at the faculty level. We now have a Dean's Strategic Planning Committee that has been meeting for over a year and has been grappling with exactly these problems. "What kind of medical school should we have? What should we be like in five, ten or twenty years?" The Committee is coming up with recommendations. These recommendations will have to be considered by department chairmen, by members of the Faculty at large, by Faculty Council, and where it affects them, by the hospital administrations and the Hospital-University Board."

Why will the Faculty decide to strive for international excellence?

"We have 16 medical schools in this country. All of them do the basic tasks well. Anyone in Canada who attends one of these schools is going to get a good education, and that will not be compromised. However, of these 16 only four, at the most, have the capacity to become excellent as judged by international standards. And those few have the responsibility to carry Canada's colours internationally. The University of Toronto stands foremost in that regard and our responsibility is the greatest.

In order to accomplish this, we have to develop very strong programs in areas wherever we can. Nowadays, excellent programs are rarely based on the strength of one particularly brilliant individual. Research and clinical teams are required. And building teams requires money. Since money is limited, it has to be used selectively and with much care. I feel that our Faculty is increasingly coming to grips with its national and international mandate."

How is this medical school now perceived on an international level?

"On the whole, I believe we are perceived quite favourably. It depends on the area, but I would say that Toronto and McGill are generally seen as international-class universities, and in some areas, McMaster is as well."

What was your greatest challenge as Dean?

"The greatest challenge in any administration, and also the greatest pleasure, is dealing effectively with people. If you just had the naked issues to deal with things would be simple. There are only so many logical choices — there

are pluses and minuses associated with any choice, and you just sit down and figure out which is the best option. However, people inevitably complicate the issues. People have divergent views, they have personal aspirations, they have territories they need or want to protect. The clash of personalities and aspirations is what always makes things difficult, and this is the greatest challenge for me.

"The challenge is always to get people to work towards an objective together and, while doing so, to help them achieve their own personal objectives as well."

Fortunately, I like people. I *like working* with the conflicts and that is one of the things I have truly enjoyed about this job. There are a lot of very good and very headstrong people here. The challenge is always to get people to work towards an objective together and, while doing so, to help them achieve their own personal objectives as well. If first-class academics achieve personal objectives then the whole university goes forward automatically.

If you want me to be more specific about challenges, producing growth in the face of the reductions in budgets has been the big issue. The way we have coped is to depend more on non-university money—hospital money and space, clinical earnings voluntarily donated by our clinical staff and encouraging our academic service groups to become cost-recoverable.

Each one of these steps carries a penalty. If we depend on hospital resources to fund our programs, to some extent we lose control over them, if our clinical colleagues in the hospitals agree to accept limits on their income and to pass over part of their earnings to fund academic development, to some extent the clinical partnerships legitimately acquire influence over their department's development. But the alternative is not to do so and suffer far worse consequences: stagnation and failure to participate in the incredible forward march of medicine and biology in this century."

What was the most satisfying aspect of the Deanship?

"One word, the people. It has been fun and it has been gratifying to see this place move forward because first-class people are working together to create a better medical school.

The changes in the undergraduate medical curriculum are all in the right direction. The reduction in the number of formal courses, the reduction in the number of didactic lectures, the increased involvement on the part of our teachers, the overall humanization of the curriculum—all of these have been gratifying.

The initial successful steps we took in pulling the network of teaching hospitals more closely together was very satisfying. By the same token it has been disappointing, since the hospital

mergers have taken centre stage, to have this framework threaten to come apart. Fortunately, it has not and there remains a high degree of cooperation among all members of the U. of T. Health Sciences Complex."

How did you become involved with the IPPNW?

"My first involvement was through the efforts of Dr. Frank Sommers who was in our Department of Psychiatry when I was chairman. He founded the Canadian branch of Physicians for Social Responsibility. Then I heard a stirring lecture by Dr. Helen Caldicott, an Australian-born Harvard paediatrician. Gradually, as I read and thought more about the nuclear threat to mankind, I began to realize that here is an area where physicians can make a special contribution. Every citizen has a duty to think about this, but physicians are aware to a deeper degree about the consequences to those living and generations unborn.

The point is that the nuclear threat now greatly outweighs the defensive benefits of mutual deterence. The threat has increased vastly since World War II. The proliferation of nuclear weapons and the increasing number of countries with nuclear potential means that this earth could be doomed by accident if not by intention. While no one but a mad person would actually start a nuclear war, technology is fallible. The Chernobyl incident in the Soviet Union and the U.S. Challenger Shuttle disaster a year ago remind us that high-tech systems do sometimes fail.

The IPPNW has demonstrated that physicians can contribute by at least alerting people to the medical dangers and the fact that doctors and entire health care systems in areas affected would be totally useless in trying to respond to unimaginable horror. In medicine when you have a disease you can't cure, you have an especially great responsibility to prevent it."

What are your plans for the future?

"I have one year of administrative leave coming so that I can upgrade my skills and retool to re-enter my own discipline after six years as department chairman and seven years as dean. I plan to spend six months of this leave now, mostly at the Kennedy Centre for Ethics at Georgetown University in Washington to follow a particular interest in bioethics. And I hope to take the other six months in the next academic year.

The areas of biological and medical ethics have fascinated me for a long time. Today's problems in bioethics go well beyond the traditional search for precepts whereby physicians and biological scientists can practice morally good medicine and good science. This search, of course, remains the keystone on which all other questions in those fields rest. However,

in addition, we confront daily specific problems for which the wisdom of previous generations has not prepared us well.

Modern technology and health care delivery are raising all sorts of ethical issues that were rarely even thought of as recently as 20 years ago. Some of these are getting a lot of publicity these days, e.g. issues related to reproductive biology. The Vatican has recently come out with a strong statement on the subject which attempts to address some of the unresolved areas. The capacity to predict future illness and disability prenatally raises all sorts of issues. The problem of termination of life with dignity, the awesome problems related to organ transplantation, genetic engineering, and so on are other examples of what I mean by new, bioethical challenges.

There are also problems more specific to my discipline, psychiatry, and others that relate to the allocation of finite resources, both micro-allocation to specific patients and macro-allocation of societal wealth.

At the University of Toronto there are a number of knowledgeable academics interested in these problems, in the Departments of Philosophy, Sociology, History and the Faculty of Law, as well as our own Faculty and the other Health Sciences. I have recently appointed Dr. John Senn of the Department of Medicine and Sunnybrook Medical Centre to coordinate our Faculty's efforts in this area.

When I return from Washington, I hope to work with him and other colleagues to establish strong teaching and consultative services in this area. Also, through the Institute of Medical Science and the School of Graduate Studies, I hope to help advance the establishment of a graduate Centre for Bioethics at this University.

I will now be returning to the Department of Psychiatry, with a clinical base at the Toronto General Hospital. There I will be teaching medical students and residents with a particular interest in psychiatric consultation, psychosomatic medicine and bioethics, and treating patients.

I believe that the major role of the Dean and all academic administrators is an enabling one; that is, to enable those who do the real work of the Faculty — the teaching and the research — to function more efficiently and with as much support as possible. Now I will return to front-line academic and clinical work and turn over our leadership of the Faculty to Dr. John Dirks, secure in the knowledge that the future is bright and our foundation solid." ■

Wind of Change May be Blowing For Continuing Education

The future may hold a major change in direction for continuing education. In the past, the onus for enhancing one's medical knowledge after graduation has been left largely to the individual physician. However, this discretionary approach may soon become far more formal.

According to Dr. Colin Wooff, Assistant Dean, Continuing Education, increasing public scrutiny of physician competency may lead to a revision in government policy regarding CE. This could mean that physicians will have to prove they have, and are continuing to maintain, professional competency. Dr. Wooff explains that enforced CE has been unsuccessful in the United States, however, in Australia a viable system for Obstetricians and Gynaecologists has developed whereby physicians are given credits for courses,

"... therefore CME can be reinterpretted to mean Competence: Maintenance and Enhancement."

teaching, publications and clincial traineeships. He adds that the College of Family Practice of Canada presently requires members to attain a certain number of credits to retain membership.

"We may be moving to a 'must' situation," says Dr. Wooff, "therefore CME can be reinterpreted to mean Competence: Maintenance and Enhancement."

The increasing focus on CE is evident within several prominent professional bodies. Opting for a consolidation of resources and tise, the College of Physicians and Surgeons of Ontario, the Ontario Medical Association and the Council of Ontario Faculties of Medicine recently joined forces to create the Physician Enhancement Program (PEP), a committee composed of two representatives from each organization. Dr. Wooff chairs the committee and says its purpose is to define physicians' needs for continuing education, and then to implement programs to address them.

Three Year Self-Directed Programs

At the local level, the past 18 months in the Faculty's Office of Continuing Education have seen considerable progress. Its role is now clearly defined, and a network of CE coordinators provides the link between CE Office and the basic science and clinical departments.

The CE Office's mandate is to become one of the leading centres for CE in North America.

The CE Office's mandate is to become one of the leading centres for CE in North America. With this goal in mind, several innovative strategies have been created.

Dr. Wooff believes the most effective approach for CE is self-directed learning. Ideally, physicians' specific CE needs are identified and then appropriate educational programs are chosen. To facilitate this, he is working on a program called the Coordinated Three Year Program Master Plan, which is exactly what its name implies. Physicians will chart their own educational programs from a coordinated inventory of seminars, lectures and workshops offered over a three year period. Last year alone, 70 CE courses were conducted in Toronto which suggests a tremendous range of options over three years.

The first stage of the Master Plan is already in place. Starting in the fall, family physicians are invited to spend 'Saturday at the University.' Six, day-long seminars, covering all aspects of medicine and running from September 1987 to March 1988, will provide a forum for updating knowledge and skills in an academic environment. The sessions offer short lectures, plenty of conversation time and opportunities to discuss specific patient care management problems.

Another interesting development is the short-term clinical traineeship system which is now operational. The system enables physicians to spend several weeks with recognized specialists in teaching hospitals, working in their particular area of interest. A handbook detailing the program will soon be available from the CE office.

Telemedicine for Ontario has also been revamped. Originally developed by the Royal College of Physicians and Surgeons of Canada and Toronto General Hospital, Telemedicine is an interactive radio broadcast used extensively for CE. It was created to give physicians in remote locations access to the concentrated expertise in the Health Sciences complex. The original 35 subscribers have grown to 220, including most of Ontario's hospitals. In the three years since its inception, Telemedicine has caught the attention of all five provincial medical schools and the Ministry of Health which provided funding until March of 1987. It is now jointly owned by the University of Toronto, McMaster University and Toronto General Hospital, who plan to make the project self-supporting and extend its audience across Canada.

CE in Remote Locations

Pregrams like 'Saturday at the University' will probably draw physicians practising in Toronto and surrounding areas. However, distance is a prohibiting factor for physicians in remote locations. Ironically, medical practice in those areas often requires a somewhat broader range of knowledge because physicians are isolated from major health centres.

"We have been very concerned with gathering input from as many physicians as possible, so we have developed the Continuing Education Consultant Network, or CECON," explains Dr. Wooff. "This is a network throughout Ontario of 68 physicians who are divided into teams according to their interests. We can now submit ideas to either the whole network or to specific teams and thus gain their input. We are working on needs in the broadest possible way."

Developing CE programs in remote locations is the focus of a major pilot study, known as the Personal Continuing Education or PECE Plan. Based on the premise that successful CE programs improve the overall quality of health care in the community, the Office is working with 112 physicians in six, small (10-15,000 people), well-defined towns to develop individualized CE programs. The study will conclude after three years with an analysis of how CE programs benefited the individual, and if there is a relationship to improved health care delivery in the community.

Three Year Self-Directed Programs

The goal of the PECE plan is to assist rural physicians in developing CE programs which will address their specific needs. Since the objective is to direct learning to unique requirements, the PECE plan is flexible and takes a very practical approach. It involves a system for quickly addressing questions as they arise in practice situations, monthly up-to-date material related to the individual's needs, a long-term learning process based on a core of information required for the individual's particular practice and all the usual CE materials. The long-term intention is to provide a widely applicable model for personal growth and learning.

Indicative of the widespread interest in the PECE plan, when the Office solicited communities for the study in its newsletter, 13 communities responded in as many days. As well, universities in Alberta and Newfoundland have expressed interest in adapting the program to their provinces.

Faculty History in Review

"This story would not be complete without a tribute to my own Medical School, and the great advances it has made which now place it as one of the ranking schools ... in North America."

Dr. Herbert Bruce, graduate of the Class of 1893 and founder of Wellesley Hospital.

This year, 1987, marks the one hundredth since the Toronto School of Medicine joined the University of Toronto to become its Faculty of Medicine. What you will read on the following pages is some of the history of what happened after the medical school and the University came together.

There are many ways to tell the story of this history. Perhaps, one of the most interesting is to talk about the people who shaped, or were shaped by, this medical school. That is what you will see here. Hopefully, you will learn more about how the Faculty of Medicine at the University of Toronto has developed into, as Dr. Herbert Bruce called it, one of the strongest medical schools in North America.

Did you know that...

■ Of the 28 Chancellors of the University, two have been graduates of Faculty of Medicine programs. **Dr. Dmand Sclandt**, who served from 1965-71, graduated from the Faculty of Medicine in 1936. A Gold Medalist and Ellen Mickle Scholar, he later became head of the Science Council of Canada. **Dr. Eva Mader Macdonald** served from 1974-77. A graduate in medicine from Dalhousie University in 1927, she went on to receive her Diploma in Public Health from the University of Toronto in 1929. She had a long career associated with Women's College Hospital and worked in cancer research with Dr. Marion Hilliard.

■ The Faculty has also produced two of the University's 12 presidents. **Dr. John R. Evans**, who served from 1972-78, graduated in Medicine from the Faculty in 1952. The current incumbent, **Dr. George Connell**, graduated from the Faculty with a specialty in biochemistry. He was head of the Department of Biochemistry from 1965-70 and served as an associate dean in the Faculty from 1972-74.

■ In 1913, **Drs. John FitzGerald and John Amyot** were the first physicians in Canada to prepare an anti-rabies vaccine.

■ **Dr. Ruth MacLachlan Franks** (1898-1962), in 1936 became the first doctor to be granted a Doctor of Philosophy (Ph.D.) degree in Psychiatry by a Canadian university. She was the first wife of Dr. Wilbur R. Franks who developed the anti-gravity suit, which was created to combat the effects of centrifugal forces while flying. It is the forerunner of the modern space suit.

■ By the late 1920s many departments in the Faculty of Medicine were running short of space. **Sir Frederick Banting**, newly named Professor of Medical Research, was particularly in need of space to enable him to continue his insulin research. In September, 1930, with funds provided by the University and the provincial government, a new building — the Banting Institute — was opened to house the various research departments. Officially opened by Lord Moynihan, the president of the Royal College of Surgeons of England, most of the building's fifth floor was allotted to the Banting and Best Department of Medical Research.

In 1954, the Best Institute was officially opened and the two structures, symbolically linked by a bridge, are still devoted principally to medical research.

■ The Faculty of Medicine at the University of Toronto is the second largest medical school in North America. Only the University of Texas boasts a larger school.

Photo courtesy Metropolitan Toronto Library Board

■ *Goldwin William Howland (1875-1850), founder of the Canadian Association of Occupational Therapists. In 1912, the official residence of the Lieutenant-Governor of Ontario, which stood on the site of what is now Roy Thomson Hall, was forced to relocate. The last State Dinner in the old residence was held in honour of descendants of previous Lieutenant-Governors. Dr. Goldwin Howland, grandson of the second Lieutenant-Governor, is seated at the far right.*

■ A keen supporter of Sir Frederick Banting's work was Sir William Mulock (1844-1944). Sir William dominated Canadian and university affairs for more than half a century. He served as Vice-Chancellor of the University from 1881-1900, and as Chancellor from 1924-44. It was largely due to his efforts that a Faculty of Medicine was successfully re-instituted into the University.

In 1890, at his own expense, Sir William sent Professor Ramsay Wright, the University's first professor of biology, to visit the laboratories of Robert Koch. Koch, a prominent German bacteriologist, received the Nobel prize in 1905 for his investigations and discoveries in relation to tuberculosis. Professor Wright's visit to the famous German authority and his splendid laboratories were a stimulus that guided the construction of the future medical building which opened in 1903.

Mulock was a generous benefactor to medicine. He and Sir Edmund Osler provided the funds that enabled Dr. Herbert Bruce to open the Wellesley Hospital.

Sir William was a prominent Liberal politician, who served in the government of Sir Wilfrid Laurier, and was responsible for introducing Mackenzie King into politics. He was re-elected University Chancellor for the sixth time at the age of 100 — unfortunately, he died several days later. It was commonly believed by students who knelt before him to be laureated that he whispered to them "Vote Liberal."

■ Abraham I. Willinsky (1885-1976) was influenced to study medicine at the University of Toronto by Sir William Osler. Following his graduation in 1908, he became a genito-urinary specialist and later served as head of urology at Toronto Western Hospital.

■ The FitzGerald Building, formerly the Hygiena Building, opened in 1927, and was one of the first schools in North America to teach public health and hospital administration.

■ Dr. Lillian Alice Chase (1894-1987) graduated from the University of Toronto's medical school in 1922, from the medical class described by many as the "year of genius". That same year, Dr. Chase and several of her classmates observed the first diabetic patient to be treated with "Banting's Fluid" as insulin was then known.

Dr. Chase's career eventually took her to Saskatchewan where she was generous with her time, always going out to the countryside to speak to women's groups. Following the Second World War, she became a staff member of Women's College Hospital and Sunnybrook Medical Centre. In 1967, the Canadian Medical Association named her a senior member. She was the only woman of the 17 senior members named in the Centennial Year.

■ Drs. Norman Shenstone and Robert James, working together at the Toronto General Hospital, studied problems associated with the removal of lobes of the lung involved in otherwise incurable bronchiectasis. Following a successful one-stage lobectomy in 1929, they devised the Shenstone-James tourniquet which became a feature of successive operations. They were largely responsible for the rapid progress in thoracic surgery, especially after 1933 when they undertook the first lung resections.

■ Dr. James Elliot Graham (1847-1899) was probably Canada's first dermatologist. He was the first Canadian to be elected to the American Dermatological Association, and the first Canadian to become president of that organization. His wife, Mary Jane, was a niece of the first Dean of Medicine at U. of T., W.T. Aikins. His granddaughter, Jane, is the wife of the University's current Chancellor, John Black Aird.

■ William Henry Beaumont Aikins (1859-1924) was a nephew of Dean W.T. Aikins, and was the first physician in Toronto to practise radiotherapy.

The Aikins family dominated medicine in Toronto in the latter half of the nineteenth century. Besides W.T. Aikins, his brother, two of his sons, two nephews and a grandnephew all practised medicine in Toronto.

■ Sir Frederick Banting also exhibited considerable skill as an artist. For Banting, painting was a great therapy, relieving him of the strains of his research. He was a frequent companion of A.Y. Jackson on painting trips to Algonquin Park. In 1943, Jackson wrote a book about these experiences called *Banting as an Artist*.

■ The McMurrich Building, north of the Medical Sciences Building, was built between 1921-22. It was named after Dr. James Playfair McMurrich (1859-1939), who was head of the Department of Anatomy from 1907 to 1930, and first Dean of the School of Graduate Studies. McMurrich distinguished himself in many ways — as teacher, educational leader, administrator, and investigator. His greatest asset, perhaps, was his ability to inspire young men and women in the pursuit of science. McMurrich was always a builder; he pressed long for a modern anatomical laboratory in the University and a colleague wrote at the time of his death, "... in 1922, his labours were rewarded by the erection of the splendid edifice which will endure as one of his monuments."

■ Almost half of the Occupational Therapists in Ontario are graduates of the Faculty of Medicine.

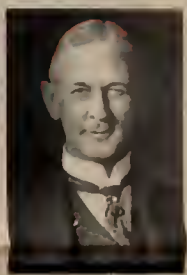
■ Dr. Ray Fletcher Farquharson (1897-1965) graduated from the Faculty of Medicine in 1921. In 1947, Dr. Farquharson succeeded Dr. Duncan Graham as the Sir John and Lady Eaton Professor of Medicine, and as Physician-in-Chief at Toronto General Hospital. He was a strong believer in the value of sound clinical investigation, and also recognized the fact that the future of medicine was inseparably associated with progressive laboratory research.

He was instrumental in establishing the Medical Research Council of Canada. When he retired from the Faculty, he became the first full-time president of the Council. In his memory the Clinical Investigation Unit at Toronto General Hospital was given his name.

■ The first woman radiologist in Canada, Dr. Elizabeth Stewart (1890-1969), graduated in medicine from the University of Toronto in 1911.

■ Dr. Archibald Byron MacCallum (1859-1934) was professor of biochemistry at the University from 1908-16. While at the University, his capable research was fundamental to the advancement of science, particularly with relation to the chemistry of blood and tissues. He was the first professor of biochemistry in Canada, and later became the first chairman of the National Research Council, establishing it solidly in sound scientific principles.

■ Irving Heward Cameron (1855-1933) was the Professor of Surgery at the University prior to its establishment on a full-time basis. The son of a justice of the Supreme Court of Ontario, he was a very cultured gentleman who never allowed himself to be called "doctor". In this, he emulated English surgeons who regarded their work more as a craft than as a healing art. Well known as a Latin scholar, he often embellished his lectures with classical quotations.



■ Frederic Newton Gisborne Starr (1857-1934) graduated from the University of Toronto in 1889. At the time of his retirement he was Professor of Clinical Surgery at the University and was closely associated with the Hospital for Sick Children, Toronto Western Hospital, Toronto General Hospital and others. Three memorials in his memory were established following his death: the F.N.G. Starr Memorial Scholarship for students entering medicine or the ministry at either Victoria College or the University of Toronto; the F.N.G. Starr Memorial Award established by the Canadian Medical Association to be conferred on any of its members and the F.N.G. Starr Coil Trophy.

■ When the present Medical Sciences Building was completed in 1968 it boasted: 750,000 square feet of floor space (about the size of three city blocks), 53 miles of steel pipe, 32 miles of uranite pipe, 20 miles of copper pipe, 10 miles of glass pipe, 5 miles of plastic pipe, one-and-a-half miles of cast iron pipe, a half mile of duron pipe and a $36-million price tag. —

Toronto's Deans of

Dean of the Faculty of Medicine at the University of Toronto — the title conjures many images. A medical school's reputation is based on a myriad of factors, and high on the list is the ability of its Dean. Nobel-laureates not withstanding, the Dean's role as administrator and ambassador has considerable, lasting influence over a school's perceived stature within academic circles and beyond.

One hundred years ago, the Faculty's first Dean assumed office. Now a century later, the Faculty welcomes its 13th Dean. The intervening time has seen significant change in the Dean's role coupled with the phenomenal evolution in medical science. Yet, even the most cursory glance at the Faculty's history shows an exceptional ability to adapt and strengthen with circumstance. A great deal of the credit for this lies with the men who have been Dean.

Dr. William Thomas Aikins

In the beginning was Dr. William Aikins, who assumed the deanship of the newly amalgamated Faculty of Medicine at the University of Toronto in September, 1887. The appropriateness of his appointment is evident when one considers that by this point, Dr. Aikins had 20 years of experience as the head of the Toronto School of Medicine, and had also been one of the prime negotiators in his school's union with the University.

Dr. Aikins was a capable and diplomatic administrator. His skill as a surgeon and lecturer was renowned throughout North America. He is considered the first physician in Canada to practise Lister's theories of antiseptic surgery. However, as one biographer notes, although Dr. Aikins had met with Lister in England several times, he was still known to park his scalpel in his teeth to free his hands while operating.

Dr. Aikins strongly believed in the healing benefits of fresh air and sunshine. As the story is told, on one occasion, Dr. Aikins was called in for consultation on a consumptive patient. While at the patient's bedside, he happened to gaze out the window at an expanse of flat roof immediately adjacent. He quickly suggested that a tent be erected on the roof to house the patient for the duration of the winter. As one might expect this unorthodox suggestion met with scepticism. In fact, the patient's relatives pulled the attending physician aside to ask if Dr. Aikins "was all there."

"All there" is certainly one way to describe the first dean. When the University of Toronto approached the Toronto School of Medicine with the merger proposal, Dr. Aikins eagerly entered the negotiations. He had believed for some time that government funding was essential to medical research, and that small, proprietary medical schools could not hope to keep pace with advancing medical knowledge.

Dean Uzziel Ogden

Dr. Uzziel Ogden

When Dr. Aikins retired due to poor health in 1893, University authorities soon appointed Dr. Uzziel Ogden as his successor. A colleague of Dr. Aikins, Dr. Ogden had also trained under John Rolph at the Toronto School of Medicine. He held the chair in Materia Medica and Therapeutics at the Toronto School of Medicine from 1853 to 1870. Then he transferred to Obstetrics and Gynaecology. When the school joined the University in 1887, he became Professor of Gynaecology. By this point, he was considered one of the finest midwifery instructors on the continent.

Probably one of Dr. Ogden's greatest accomplishments was the sheer longevity of his teaching career. For more than 50 years, he introduced students to medical science. This, from a man considered frail and delicate in his youth.

Dr. Ogden's term as Dean lasted three years, during which time he worked to consolidate the programs initiated by his predecessor. In 1903, seven years after his retirement, minutes from a Faculty Council meeting record the following testiment to his career: "To impart many of the facts and theories of medical science to successive generations of students for half a century and to impress upon them the indelible, though unconscious, stamp of a high example of life and character, is an opportunity for usefulness and a sphere of influence vouchsafed by few ..."

Dr. Richard Andrews Reeve

Dr. Richard Reeve became the third Dean of Medicine in 1896. For the 12 years of his term, which lasted until 1908, he guided the Faculty through a period of significant growth and development. When he assumed office, work on the new library, biology and chemistry buildings was nearing completion, and fire damage to one of the Faculty's main buildings, sustained in 1890, had been repaired. In fact, one of the earmarks of Dr. Reeve's tenure was construction. Under his leadership the new Medical Building was designed and built in 1903.

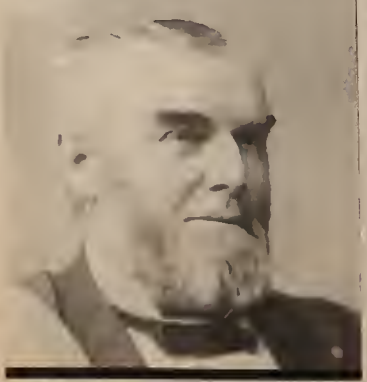
Dean Reeve possessed considerable skill with people. During merger talks between the medical school at Trinity College and the University of Toronto, he acted as one of the primary negotiators. The proposed union was hotly contested by Trinity's Dean Walter Gelkie who felt that small, manageable medical schools regulated under a provincial licensing board would best serve the needs of the medical profession. However, Dr. Gelkie was unable to back these claims with sufficient funding for Trinity. After his resignation in 1903, Trinity's medical school joined the Faculty of Medicine. Three years later, the Ontario Medical College for Women also became part of the Faculty.

In his medical career, Dr. Reeve was unique in several aspects. An ophthalmologist, he is commonly considered the first specialist in Canada.

Dr. Charles Kirk Clarke

The fourth Dean of Medicine was also a specialist, albeit of quite another type. From 1908 to 1920, Dr. Charles Clarke, the Faculty's first professor of psychiatry, held the Dean's position.

Dr. Clarke's contribution to improving the lot of the mentally ill is legendary in Canada. Throughout a 50 year career, he was relentless in his efforts towards changing



Dean William Thomas Aikins

Dean Richard Andrews Reeve

Medicine — 1887-1980

Dean Charles Kirk Clarke

the public perception of psychiatric disorders from fear and distrust to caring and sympathy.

In 1908, three years after accepting the Superintendency of the Toronto Asylum for the insane, he was appointed Dean of Medicine. At roughly the same time, he was also made the Faculty's first professor of psychiatry.

Two years after his appointment the now-famous Flexner Report on the state of medical education in North America was published. Flexner summarized the operations of Canada's eight medical schools with, "In the matter of medical schools, Canada reproduces the United States on a greatly reduced scale. Western University (London) is as bad as anything to be found on this side of the line; Laval (Quebec) and Halifax Medical College (Dalhousie) are feeble; Winnipeg and Kingston represent distinct efforts towards higher education; McGill and Toronto are excellent."

When Dr. Clarke took over, Trinity's medical school had already joined Toronto, and the first five year medical course was inaugurated. One of Dr. Clarke's major challenges was to work with the teaching hospitals in improving their facilities, so that medical students received adequate clinical instruction. Dr. Clarke's efforts were compounded by the outbreak of World War I, with the inevitable shortage of staff and equipment, and a concommitant demand for trained medical personnel at the front. Adding to this, Dr. Clarke was also responsible for organizing the University's No. 4 overseas hospital in France, which consisted of 1,040 beds. However as Dean through 12 fairly turbulent years in Faculty history, Dr. Clarke excelled. He resigned in 1920, to devote his time to leading the National Committee for Mental Hygiene.

Dr. Alexander Primrose

His successor was Dr. Alexander Primrose, who had served as Faculty Secretary under Drs. Reeve and Clarke. From all accounts, he was admirably suited to the Deanship. A graduate of the University of Edinburgh, Dr. Primrose set up surgical practice in Toronto in 1889. The Faculty made him Professor of Anatomy in 1896. During World War I, he went overseas to head up surgery at the University's hospital in France. Noted for his coolness and devotion to duty, he was later asked to become a consultant to the Canadian Army in England, and given the rank of colonel. An appointment as Professor of Clinical Surgery followed in 1918, when he returned from the War.

Under Dean Primrose's administration, research within the Faculty flourished. In 1920, the Department of Radiology was formed. In 1922, members of the Department of Physiology announced they had discovered insulin. This discovery, of course, lead to a Nobel Prize in Medicine for Drs. Frederick Banting and J.J.R. MacLeod (the department chairman) in 1923.

Under the initiative of Dr. John FitzGerald (who would succeed Dr. Primrose as Dean in 1932), the School of Hygiene was created in response to the growing need for post-graduate medical training in public health and hygiene. This project soon found support from the Rockefeller Foundation which supplied funding for endowment and for a building to house the school.

Dr. John Gerald FitzGerald

When Dr. John FitzGerald was appointed Dean in 1932, he brought to the position a world-wide reputation for innovative thinking and administrative ability. A graduate of the Faculty's Class of 1903, he was initially interested in pursuing a career in psychiatry. After an internship at Buffalo State Hospital and a year as a clinical assistant at Sheppard Hospital in Baltimore, he returned to Toronto with an appointment as Pathologist and Clinical Director of the Toronto Hospital for the Insane, and demonstrator in psychiatry in the Faculty of Medicine.

Shortly after this, he went to Harvard for graduate work where he was introduced to a newly-developing field — becteriology. This introduction had a profound influence on his career. In 1909, he again returned to Toronto, this time as lecturer in bacterlology. In 1911, he wes offered a professorship in this field by the University of California which he was able to combine with summer studies at the Pasteur institutes in Paris, Brussels and Freiburg.

Dean John Gerald FitzGerald

When he returned to the Faculty for the third time in 1913, it was with a clear vision of a Canadian laboratory, similar to facilities in place in Boston, New York and Albany, designed to prepare serums and vaccines. In 1913, he was appointed Associate Professor of Hygiene. This appointment brought him into contact with Dr. John Amyot, Professor of Hygiene and director of the laboratory of Ontario's Provincial Board of Health. Together they were able to secure lab facilities to produce Canada's first antirabies vaccine.

Soon after this successful venture, Dr. FitzGerald approached the University's Board of Governors with a proposal for laboratory and research facilities that would enable university researchers to prepare high-quality, low-cost sera and vaccines which would then be made available across Canada. He also envisioned that the new facilities would greatly encourage the level of research in hygiene and preventive medicine.

In fact, Dr. FitzGerald was so enthusiastic about the idea that he proceeded independently, using his own money to open the lab and begin preparing a diphtheria anti-toxin. Months later, the University took responsibility for the venture, and Dr. FitzGerald's anti-toxin lab became an officially recognized component of the Department of Hygiene. in 1915, with a genereus donation from Sir Albert Gooderham, the lab expanded into a new building and bought a farm for its research animals. The facility was named the Conneught Laboratory in honour of the Duke of Conneught, the Governor-General of Canada, and third son of Queen Victoria.

Dr. FitzGerald's four year term as dean was a true testiment to the University's recognition of the importance of hygiene and preventive medicine in the educational curriculum.

Dean Alexander Primrose

Dean William Edward Gallie

Dr. William Edward Gallie

The seventh Dean of Medicine, Dr. W.E. Gallie, who held office from 1936 to 1946, was one of the most gifted surgeons ever produced by the Faculty of Medicine. As the dozens of surgeons who trained under him could attest, he was not only brilliant and innovative in surgery, but he also made tremendous inroads in improving surgical training.

He entered the Faculty at 17, and graduated, the youngest member of his class, in 1903. Over the next three years, he interned at the Hospital for Sick Children, Toronto General Hospital and the Hospital for the Ruptured and Crippled in New York. In 1906, he returned to Toronto to an appointment as an orthopedic surgeon at the Hospital for Sick Children. A year later, he was given a concurrent appointment as a junior surgeon at Toronto General.

In 1910, he gave up his appointment at Toronto General, so that he could devote himself wholeheartedly to assisting Dr. Starr, who was chief of orthopedics at Sick Kids. Then in 1913 with a reorganization of the hospital, Dr. Starr became surgeon-in-chief. Dr. Gallie was the only other surgeon retained, and between them they formed the nucleus of the new surgical staff.

Shortly after, in 1921, C.L. Starr became Surgeon-in-Chief at Toronto General, and was also made Canada's first full-time professor of surgery. Dr. Gallie succeeded him as Surgeon-in-Chief at the Hospital for Sick Children. Dr. Starr's university appointment was a turning point in the history of surgery in Canada. By this time, it was obvious that the Faculty's approach to surgical training had to be formalized.

With the death of C.L. Starr in 1928, Dr. Gallie took over his responsibilities at Toronto General and in the Faculty of Medicine. Stepping into his mentor's shoes again, Dr. Gallie focussed his efforts on fulfilling Dr. Starr's dream for the Faculty's Department of Surgery.

He quickly won the respect of the staff at Toronto General, which according to one of his former students, was no mean feat since he was the second chief of surgery to come from the Hospital for Sick Children. He also brought St. Michael's and Toronto Western Hospitals into the teaching hospital network, which gave their surgeons academic appointments.

However, his greatest accomplishment was in the creation of the "Gallie Course." His concept was to provide surgical residents with adequate training in the basic sciences and in surgery, that would qualify them to sit for the Royal College of Physicians and Surgeons examinations. This course was the first of its kind in Canada, since previously candidates were forced to undertake this type of training outside the country. In fact, when it was introduced the Gallie Course was more advanced than anything comparable in England or the U.S., and applications were soon coming in from around the world.

In 1947, he was awarded the gold medal of the Royal College of Surgeons of England — only the 20th surgeon to receive the award in over 150 years.

His retirement from the Dean's Office in his word, "brought to a close a period in which one of the departmental heads had always acted as chief administrative officer."

Following the Second World War, the University realized the need for a full-time dean of medicine, who would be dedicated to furthering medical education in general. The demands on the position could no longer be fulfilled by a part-time dean, who had a myriad of other responsibilities in his own department. Around the world, significant changes in medical education were being implemented, and since Toronto was determined to stay abreast, a solution had to be found.

Dr. Joseph Arthur MacFarlane

Thus, the full-time dean's appointment was created, and into the position stepped Dr. J.A. MacFarlane, in 1946. For the next 15 years, Dr. MacFarlane provided the Faculty with dedicated leadership and a keen sensitivity to students.

Dr. MacFarlane's own student life makes an interesting story. He was born near Carleton Place, Ontario in 1893. When he was 14, his family moved to a homestead in Saskatchewan. For the next few years, his education was forsaken in favour of farming. However, one day while walking behind a plow, he vowed to return to school as soon as one was built in the neighbourhood. He made good this promise, and eventually won a scholarship to the University of Saskatchewan. In 1915, he was elected a Rhodes Scholar, but the First World War intervened. From 1916 to 1918, he was a stretcher bearer in France. After the war ended, his Rhodes Scholarship was still available, however, he was apparently counselled by Sir William Osler (who was then at Oxford) to enter medical school in Toronto.

He graduated from the Faculty, and completed his internship at the Hospital for Sick Children, where he decided to specialize in surgery. Over the next few years, he studied at Oxford, London, and eventually Edinburgh where he wrote his Fellowship in the Royal College of Physicians and Surgeons.

In 1925, he was offered the senior residency at Toronto General Hospital, and within two years was appointed to the staff of the hospital and the university. With the outbreak of war in 1939, he enlisted again, however this time as chief surgeon of the No. 15 General Hospital. Two years later, he became consulting surgeon to the Canadian Army overseas with the rank of brigadier. As such, he was responsible for 24 hospitals ranging throughout Northern Africa, Italy, Sicily and England. One of his innovations was the creation of mobile surgical centres set up in trucks that drove into the thick of the fighting.

When the war ended, Dr. MacFarlane became director of surgery at the Christie Street War Veterans Hospital (now Sunnybrook Medical Centre) and rejoined the Faculty. Then, he was offered the dean's position.

With Dr. MacFarlane at the helm, the Faculty made major strides forward, strengthening post-graduate and psychiatric programs, extending research in obstetrics and gynaecology, creating the division of rehabilitation medicine, and perhaps most notably, developing the Department of Medical Biophysics for cancer research.

Dr. John Drennen Hamilton

Throughout Dr. MacFarlane's tenure in the late 1940s and early 1950s, primary emphasis was placed on enhancing medical education, with a goal of training physicians. While research was going on throughout this period, in the words of Dr. John Hamilton, who succeeded Dean MacFarlane in 1960, "the faculty was overwhelmed with teaching ..."

However, by the late 1950s, student enrollment had stabilized, and the focus turned to enhancing research. "The minute the pressure diminished a little bit, say on the teaching side, the sense of urgency about research increased really in direct proportion to the development of research in the United States, because it began to boom there, and Congress was soon allocating a billion dollars a year by the early 1960s," explained Dr. Hamilton.

Dr. Hamilton's sensitivity to research may have been in part due to his own extensive research experiences in pathology, although he always maintained that teaching was his first love. He graduated with his M.D. from the Faculty in 1935, interned at Toronto General Hospital, and then spent two years as a demonstrator in pathology. In 1937, he accepted a position as pathology demonstrator at Cambridge in England, which he followed up with a

Dean Joseph Arthur MacFarlane

Dean John Drennan Hamilton

year as assistant resident in pathology at Johns Hopkins Hospital in Baltimore.

During World War II, he served for five years with the Royal Canadian Army Medical Corps. During this period, he had the opportunity to work with Sir Alexander Fleming, studying the effects of penicillin. Coincidently, another member of the research team was Dr. A.L. Chute, who would succeed Dr. Hamilton as Dean in 1966.

Dr. Hamilton came back to Canada in 1945 to an appointment as assistant Professor of Pathology at McGill University. The next year, he became head of the Pathology Department at Queen's University. Then in 1951, he took over the Department of Pathology at U. of T.

Under his administration, the Faculty initiated plans for the construction of the new Medical Sciences Building to house researchers, and to provide space for the growing numbers of undergraduate medical and health sciences students. By this point, the Faculty had agreed to increase the number of medical students in each year from 150 to 250. It was also during this period, that the University purchased Sunnybrook Hospital for the sum of $1, and developed plans to integrate it into the teaching hospital network.

Dr. Andrew Lawrence Chute

The tenth Dean of Medicine, Dr. A.L. Chute held office from 1966 to 1973. Born in India, where his parents were medical missionaries, Dr. Chute was educated at the University of Toronto, obtaining his B.A. in 1931, his M.A. in 1932, and his M.D. in 1935. He then spent a period at the University of London, studying physiology and graduated with his Ph.D. in 1939.

During the Second World War, he served in England, Egypt, Libya and Germany, and was awarded the Order of the British Empire for his research in tank warfare. After the War, he studied for a period at the New England Deaconess Hospital, returning to Canada in 1947 with an appointment as associate professor in the Banting and Best Department of Medical Research. In 1952, he was made chief of paediatrics at the Hospital for Sick Children, with a concurrent appointment as chairman of the Faculty's Department of Paediatrics.

In his seven years as Dean, Dr. Chute was faced with several major challenges. Perhaps the two most notable were the development of a new curriculum, and a redefinition of the University's relationship with its teaching hospitals, which had changed drastically with the advent of the provincial government's universal health care plan and the major increase in medical students.

In the area of curriculum development, Dr. Chute explained in a 1978 interview, "The curriculum was taught by department ... the head of the department usually decided in relation to the amount of time that was allotted to his department how many lectures were to be given, how many demonstrations were to be given, who would give them and so on, so that the whole of the curricufum was really broken up into as many parts as there were departments in the medical school. This led to a lot of duplication and to a considerable number of gaps because there was no overall look at the total content. The various subjects were thought of as separate subjects but there was no integration."

Dean Andrew Lawrence Chute

Dean Richard Brian Holmes

In revising the model for education, the Faculty based its thinking on the "systems teaching" approach developed at the Western Reserve University in Cleveland, which encouraged the various departments to collaborate in curriculum planning.

Working out equitable financial relationships between the Faculty and its teaching hospitals was not an easy matter. As Dr. Chute explains, "... with the introduction of insured health care, the idea of the medical professional providing a large amount of educational time free, went out the window. The question arose then as to how this educational time was to be paid for. The final arrangement was a subsidy from the Department of Health which went through the hospitals but was controlled by the University on the basis of how much time the individual spent teaching, and this was controlled essentially by the chairman of the department in the hospital."

Dr. Richard Brian Holmes

The administration of Dean Brian Holmes, who succeeded Dr. Chute in 1973, was also faced with major challenges — the integration of the School of Hygiene into the Faculty of Medicine, site accreditation visits by both the LCME/CACMS and the Royal College of Physicians and Surgeons, a reorganization of the Dean's Office which saw associate dean positions created to address specific needs within the Faculty, and the first of the major budget cuts.

Dr. Holmes brought to the position a keen understanding of the Faculty's operations and well-proven administrative ability. A 1943 graduate of the medical school at the University of Western Ontario, he completed his M.Sc. there in 1949. He became the Chairman of the Department of Radiology at the University of Toronto in 1965, and was also appointed Radiologist-in-Chief at Toronto General Hospital at that time. He was Associate Dean for Clinical Affairs under Dr. Chute.

Although not a U. of T. alumnus, Dr. Holmes made major strides in strengthening the relationship between the Faculty and its alumni association. He assisted the medical alumni executive in launching the Faculty's first alumni fund-raising campaign which raised more than a quarter of a million dollars. In a 1983 interview for the Hannah Institute for the History of Medicine, Dr. Holmes expressed his appreciation of the alumni: "The Medical Alumni warmed my heart by the way they jumped in and really worked at this. The other thing I was glad to be able to do for them in return was to find them better space for their office. We did find them more space in a decent building ... We were able to bring them back into the fold which is where they belong." ▬

A Survey of Graduates

A major element in the history of any educational institution lies in the stories of its graduates' subsequent careers. With a school the size of this Faculty of Medicine, which can boast of thousands upon thousands of alumni, the potential for story telling is almost unbounded.

Over the next four pages, the stories of 30 Faculty alumni, who graduated between 1887 and 1937, are detailed. Some of these people are household names, some achieved stature in places thousands of miles from Toronto, while still others could perhaps be called 'unsung heroes.' Whatever their claim to fame, each of these men and women used the training they received in the Faculty of Medicine, and in some way improved life for those around them.

This is by no means an exhaustive list. Readers are invited to suggest the names of Faculty alumni from any graduating class who should be featured in future issues of TABLET. Please write to: TABLET, Faculty of Medicine, University of Toronto, Medical Sciences Building, One King's College Circle, Toronto, Ontario, M5S 1A8.

Elizabeth Catherine Bagshaw *(1881-1982)*, pioneer in family planning. Graduating from the Ontario Medical College for Women, through the University of Toronto, in 1901. She joined Dr. Helen MacMurchy in Hamilton and made house calls by horse and buggy. In 1931, defying the Criminal Code and risking a jail term, she became medical director of the Birth Control Society, the first in Canada. Called a heretic and a devil by the Bishop of Hamilton, she remained the clinic's medical director until 1966. It was not until 1969, three years after her retirement, that the law was changed and family planning in Canada became legal.

Charles Herbert Best *(1899-1978)*, co-discoverer of insulin. He was studying physiology and biochemistry at the University of Toronto as a preliminary to medicine when he assisted Banting in the discovery of insulin. Entering medicine as the University's "most famous undergraduate," he graduated in 1925, and in 1929 succeeded Dr. MacLeod as head of the physiology department. Serving with the navy during World War II, he was largely occupied in research into the prevention of seasickness. Following the War, he was instrumental in establishing the C.H. Best Research Institute. He shared, at Banting's insistance, Banting's half of the Nobel Prize in 1923. Professor MacLeod received the other half.

Sir Frederick Grant Banting *(1891-1941)*, co-discoverer of insulin. He first entered the University of Toronto to study for the ministry, but transferred to medicine, and graduated in the accelerated course in 1916, a classmate of Norman Bethune. Dr. Banting served in the Canadian army's medical corps and received the military cross. Following the war, he received a minor appointment in London's medical school. It was his reading in the library there that led him to the idea of ligating the pancreatic duct, to permit the extraction of insulin. He joined the staff of the University of Toronto in 1921. Later that year with Charles Best and J.J.R. MacLeod (head of the Department of Physiology), he was the first to obtain insulin in a form consistently effective for the treatment of diabetes mellitus. In 1923, he received the Nobel Prize, and was knighted in 1934. He died in a plane crash while on a war mission in 1941. His wife, Henrietta Bali Banting, subsequently graduated from the Faculty and specialized in cancer research.

(Henry) Norman Bethune *(1890-1939)*, physician and surgeon in Canada, Spain and China. He graduated from the University in 1916. He invented a number of surgical instruments, of which the Bethune Rib Shears were the most lasting. A pioneer publicist for socialized medicine, he served briefly with the Loyalists in the Spanish Civil War, and organized the world's first mobile blood transfusion unit. He went to China in 1938, attaching himself to the Communist forces of Mao Zedong who was then fighting the invading Japanese. Dr. Bethune has since become one of mainland China's greatest heroes. He died in China as the result of an infection contracted in the operating theatre.

Davidson Black *(1884-1934)*, discoverer of the skull of Peking Man. Dr. Black graduated from the University of Toronto in 1906, but the practice of medicine did not appeal to him. From 1925, his interests turned to anthro-

Oliver R. Avison *(1860-1956)*, pioneer physician in Korea. Graduating in 1887, Dr. Avison joined the staff of the reconstituted Faculty of Medicine in the University of Toronto in the same year. In 1893, he resigned and went to Korea, a country that previously had refused to let Westerners across its borders. In the late 19th century, epidemics were killing thousands of Koreans, and the Emperor gave orders that Western doctors and missionaries would be allowed in. For the next 40 years, Dr. Avison worked there and became so admired by the people of Korea that they raised a statue of him in the capital city of Seoul. He founded a hospital there that became one of the best-equipped and most famous in Asia. In 1934, he was forced to leave when the Japanese invaded Korea. In 1985, students of Yonsei University in Seoul erected a pagoda in his memory on the grounds of the University of Toronto and it can be seen east of the E.J. Pratt Library on Queen's Park Crescent.

— The First Fifty Years

pology, especially after his appointment as head of the anatomy department at Peking Union Medical College. In 1929, he discovered Peking Man, an important clue to the nature of man's ancestors, and development. In 1941, the bones disappeared with the confusion which ensued following the Japanese invasion of China.

Alan Brown *(1887-1960)*, said to be the greatest Canadian paediatrician of his time. He graduated from the University in 1909. Following postgraduate work in the U.S. and Europe, he returned to Canada with the best credentials of any paediatrician then in the country. In 1919, he became Physician-in-Chief at the Hospital for Sick Children, and under him it became one of the finest paediatric hospitals in the world. As an administrator he was a blunt, demanding disciplinarian, but while caring for children his true humanitarianism was apparent. A pioneer in the field of infant feeding, his strict policies greatly reduced the problem of cross infection.

Herbert Alexander Bruce *(1868-1963)*, founder of the Wellesley Hospital. He graduated from the University in 1893. Following post-graduate study in Europe, he returned to Toronto with a Fellowship in the Royal College of Physicians and Surgeons (England) — only the second Canadian to receive this award by examination. He became one of the finest surgeons of his time, and his practice grew. In order to house his private patients, he founded the 100-bed Wellesley Hospital with assistance from Sir William Mulock. Active in community work he was appointed Lieutenant Governor of Ontario in 1932. During his five year term, he exposed the plight of slum dwellers living in Toronto's Regent Park district. As a member of Parliament during World War II, he was a constant critic of the government's war efforts.

Harriet McMillan Cockburn *(1873-1948)*, World War I heroine. She graduated from the Ontario Medical College for Women, through the University of Toronto in 1897. Following graduation, she practised in Cobourg, later becoming a medical missionary. In October, 1915 World War I was in its second year, and Dr. Cockburn was in Serbia when the Germans and Bulgarians invaded. The Serbian army was forced to retreat over the Albanian Alps in the winter, many individuals barefoot or in cotton pyjamas. Dr. Cockburn and a small group of other doctors formed a hospital unit to march with the wounded in the sleet and blizzards. On getting over the mountains, the army marched along the coast to Corfu and Dr. Cockburn was taken on board an Italian ship to Brindisi and from there back to Toronto. A grateful people recognized her sacrifice for them when the King of Serbia decorated her with his country's highest honor. Her papers, including her own documentation of the events, were donated to the University of Toronto archives.

James Bertram Collip *(1892-1965)*, co-worker in the refinement of insulin. He graduated from the University in biochemistry in 1912. Following graduation, he was asked to form a biochemistry department for the new University of Alberta. While on leave from that university, he worked with Banting on the refinement of insulin for commercial use. In 1928, he was appointed to the chair of biochemistry at McGill University, and did major work on the pituitary hormones. He was the first to isolate the hormone ACTH.

Allan Roy Dafoe *(1883-1943)*, physician to the Dionne quintuplets. He graduated from the University of Toronto in 1907. Known as the northland's "Little Doc," his major achievement was in keeping the Dionne quintuplets alive following their birth in 1934.

Robert Defries *(1889-1975)*, director of the Connaught Laboratories from 1940-55. He graduated from the University in 1912, and then became the first student to enrol in the diploma course in Public Health in the University of Toronto, receiving his D.P.H. in 1914. He was closely associated with Dr. J.G. FitzGerald in the establishment of the anti-toxin laboratory in the School of Hygiene in the Faculty of Medicine. During World War I, he prepared the tetanus anti-toxin for the Canadian Expeditionary Forces. Upon the death of Dr. FitzGerald, in 1940, Dr. Defries became Director of the School of Hygiene and the Connaught Laboratories. Under him the laboratories expanded their research programs, and the preparation of essential biological products. He was internationally recognized as a major contributor to the good of public health.

Photo courtesy, Archives of the Academy of Medicine

Theodore George Harwood Drake *(1891-1959)*, co-inventor of the infant food Pablum. He graduated from the University in 1914. In 1926, he visited the Finsen Institute, Copenhagen in order to get further information on ultraviolet-light therapy. This was an invaluable experience for his future work in the measurement of sunshine and the development of Pablum. From 1949-54, he was Director of Research Laboratories at the Hospital for Sick Children. Dr. Drake was an ardent collector of antique objects relating to the care and welfare of infants and children. During his 35 years of collecting, he assembled over 3,000 specimens dating from Egyptian, Greek and Roman times to the 19th century. Following his death, Mrs. Drake donated the T.C.H. Drake collection to the Academy of Medicine, Toronto.

Photo courtesy, Department of National Defence

Wilbur Rounding Franks *(1901-1986)*, inventor of the anti-blackout flying suit. He graduated from the University of Toronto's Faculty of Medicine in 1928. He was renowned as a cancer researcher at the Banting Institute and returned to this field after his World War II experiments. In 1942, Dr. Franks solved a problem that had baffled the Allies best scientists in a project that was one of the top secrets of the war. In his cancer research, Dr. Franks found that glass tubes kept shattering in tests on carcinogens using a high-spaed centrifuge. He started experimenting with small tubes in larger ones. Not a single one broke. Applying this principle to his aviation experiments, he created the "G" suit or "anti-blackout" suit. Credited with saving thousands of Allied fighter pilots during World War II, his invention is worn by every air force pilot in the world, as well as astronauts and cosmonauts. He also designed the world's first centrifuge — a gondola at the end of a rapidly spinning boom and it is now used in training astronauts.

Caricature by Sir Frederick Banting

Duncan Archibald Graham *(1882-1965)*, first full-time head of a department of medicine in the British Empire. He graduated from the University in 1905. In 1919, he was offered the position as the first Sir John and Lady Eaton Professor of Medicine at the University and Physician-in-Chief at Toronto General Hospital, appointments he held until 1947. He regarded medical practice as an agency to "carry into clinics the findings of the laboratories, to apply discoveries, not make them." But during his term, many discoveries were made at the University and much of the pioneering work in spreading the use of insulin was done under his direction. During this period, also, Dr. Graham's influence on medical education extended far beyond Toronto.

Jessie Catherine Gray *(1910-1978)*, Canada' first woman surgeon. She graduated from the University of Toronto in 1934 with a gold medal. Dr. Gray was the first female resident at Toronto General Hospital, and from 1945-65, she was Surgeon-in-Chief at Woman's College Hospital. While there she set up Canada's first cancer detection clinic and was considered one of the leading cancer surgeons in North America. In 1973, Toronto Mayor David Crombie presented her with a civic award of merit and informed her that she had delivered both his wife and himself.

(Anna) Marion Hilliard *(1902-1958)*, pioneer woman doctor. She graduated from the University of Toronto in 1927. Following post-graduate study in Europe, she returned to Toronto and joined the staff of Women's College Hospital, specializing in obstetrics and gynaecology. In 1947, she became chief of that service in the Hospital. With Dr. Jessie Gray, she was responsible for establishing the Cancer Detection Clinic and with Dr. Eva Macdonald she developed a new and simpler method of detecting early symptoms of cancer, particularly in the cervix. She advocated prenatal training for mothers and urged a minimum of eight days confinement for new mothers to establish stronger mother-child relations and to promote breastfeeding. It was an uphill fight for Dr. Hilliard and her associates to gain public acceptance for women doctors, but their efforts eventually won wide renown for Women's College Hospital. She was responsible for the Hospital becoming a teaching hospital.

Clarence Meredith Hincks *(1885-1964)*, pioneer in mental health treatments. He graduated from the University of Toronto in 1907. After several years in general practice, he was appointed a district medical officer for Toronto's Health Department and worked in Parkdale schools. He became interested in retarded children and in 1913 introduced the I.Q. test into Canada in order to determine the extent of this problem in school children. In 1914, Dr. Hincks and Dr. C.K. Clarke established the first psychiatric outpatient clinic in Canada at the Toronto General Hospital. Four years later they organized the National Committee for Mental Hygiene (later the Canadian Mental Health Association). He helped introduce occupational therapy into mental hospitals and introduced a program in the newly formed department of psychology in the University of Toronto. A founder of many of the mental health organizations in North America, he was medical director of the U.S. National Committee for Mental Hygiene from 1931-39.

Photo courtesy Metropolitan Toronto Library Board

Goldwin William Howland *(1875-1950)*, pioneer in occupational therapy. The scion of a prominent family, his father was mayor of Toronto and his grandfather was a Father of Confederation and later Lieutenant Governor of Ontario. He graduated from the University of Toronto in 1900. Following post-graduate study in Europe, he joined the staff of Toronto General Hospital, with special responsibility for the care of neurological patients. After service in World War I, he set up a department of occupational therapy in the hospital — the first in Canada. He founded the Canadian Association of Occupational Therapists, and was its first president. In 1945, the Association established a scholarship in his honor. Dr. Howland was canoeing in Algonquin Park in 1917, when he discovered the body of artist Tom Thomson.

Robert Meredith James *(1894-1966)*, one of Canada's greatest surgeons. He graduated from the University of Toronto in 1916. Almost all his professional life was spent in association with the University and with Toronto General Hospital. He was Surgeon-in-Chief at T.G.H. and professor of surgery in the Faculty from 1947-57. He had an international reputation as a teacher and his surgical skill, in a full and highly specialized operation, was recorded on film for teaching use across North America.

Helen MacMurchy *(1862-1953)*, pioneer in child care. She graduated from the Ontario Medical College for Women through the University of Toronto, in 1901. She was the first woman to intern at Toronto General Hospital and later studied under Sir William Osler. Dr. MacMurchy became

Photo courtesy, Archives of the Academy of Medicine

renowned for her work with children and the mentally ill. In 1910, she wrote the first major report ever made to any government on the subject of infant mortality. From 1930-34, she served as Chief of the Child Welfare Division of Canada. In 1949, she was recognized as one of the ten most remarkable women doctors in the Western World.

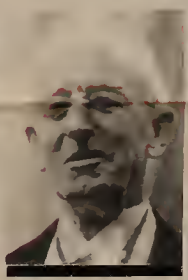
Robert McClure *(b. 1900)*, medical missionary. He graduated from the University of Toronto in 1922. That year he went to China as a medical missionary and was the first to treat cancer with radium. He served as field director in the International Red Cross during the Sino-Japanese war. He later treated Palestinian refugees on the Gaza Strip. Working in India, he established a radium clinic and instituted birth control programs. He subsequently saw service in Borneo, Peru, Malaysia and Zaire. In 1967, he was elected the first lay moderator of the United Church of Canada.

John McCrae *(1872-1918)*, surgeon and poet. He graduated from the University of Toronto in 1898 with a gold medal and scholarships for outstanding performance. After interning at Toronto General Hospital, he enlisted for service in the Boer War. Upon his return to Canada, he set up practice in Montreal. With the outbreak of World War I, Dr. McCrae was one of the surgeons stationed in France. In April, 1915, a close friend was killed. The following day as Dr. McCrae sat on an ambulance at Ypres looking at the cemetery where his friend was buried, he wrote, "In Flanders Fields". This poem established the poppy as the symbol of the sacrifices suffered in war. After three years of overwork, John McCrae contracted cerebral meningitis and died on January 28, 1918.

Kenneth George McKenzie *(1892-1964)*, Canada's first neurosurgeon. Dr. McKenzie graduated from the University of Toronto in 1914, second in his class. In 1923, he joined the staff of the Toronto General Hospital and established the first neurosurgical service in Canada. At the same time he was associate professor of surgery at the University, until his retirement in 1952. A colleague of Dr. McKenzie wrote, "He was a tremendous innovator and a number of surgical clips and instruments were developed by him. Some of the clips are known universally as McKenzie clips, and are used to stop bleeding from severed blood vessels." He was a pioneer of many of the accepted techniques and developments of neurosurgery.

Maude Leonore Menten *(1879-1950)*, pioneer biochemist. She graduated from the University of Toronto in 1907, and four years later became one of the first Canadian women to receive a medical doctorate. In Germany in 1913, she collaborated with Leonor Michaelis on a study of the behavior of enzymes resulting in the basic biochemical concept the Michaelis-Menten equation. The international recognition brought her offers from around the world. From 1918, she served as a pathologist at the University of Pittsburgh and published extensively on medical and biochemical subjects. Her many achievements included important co-discoveries relating to blood sugar, haemoglobin and kidney functions.

William Thornton Mustard *(b. 1914)*, orthopaedic surgeon. He graduated from the University of Toronto in 1937. From 1948-64, he was head of Orthopaedic Surgery at the Hospital for Sick Children and was head of cardiovascular surgery from 1964-76. An innovative surgeon, he was the first to use prosthetic glass tubes in wounded arteries and in the repair of congenital defects in early infancy. His most important contributions were the development of the ileopsoas transfer operation and the Mustard atrial repair for children.



Gordon Murray *(1894-1976)*, pioneer in the use of the artificial kidney. He graduated from the University of Toronto in 1921. Dr. Murray was the first to use heparin clinically as an anticoagulent and developed and introduced the first successful artificial kidney in North America in 1946. He was a pioneer in cardiac surgery and was the first director of research at the W.P. Caven Memorial Research Foundation (later the Cairdner Medical Research Foundation).

Lawrence Bruce Robertson *(1885-1923)*, pioneer in blood transfusion. Graduating from the University of Toronto in 1909, Dr. Bruce Robertson worked on transfusion techniques as a major in the Canadian Army Medical Corps. Following the war, he became convinced that a change of blood could greatly benefit children suffering from infection in the blood. He suggested and brought into operation exsanguination combined with transfusion. After a great deal of research and experimentation he perfected the technique so that a greater part of the entire blood system of an individual could be withdrawn and new blood from a series of donors substituted. His career was cut tragically short when he died at age 37.

Clarence Leslie Starr *(1868-1928)*, the University's first full-time professor of surgery. He graduated from the University of Toronto in 1890. Following post-graduate work overseas, Dr. Starr specialized in orthopaedic surgery. During World War I, he was surgeon-in-chief of a special hospital at Ramsgate, England, and helped organize similar work at the Christie Street Hospital in Toronto (the predecessor of Sunnybrook Medical Centre). In 1921, he was appointed the first full-time professor of surgery at the University and at the same time, Surgeon-in-Chief at Toronto General Hospital. Under his direction the department of surgery was recognized throughout the world for its efficiency.

Photo courtesy Archives of the Academy of Medicine

Frederick FitzGerald Tisdall *(1893-1949)*, co-inventor of Pablum. He graduated from the University of Toronto in 1916, and early in his career took a special interest in the health care of children. He originated a health scheme throughout Toronto schools to study the dietary habits of children. In 1927, his experiments with natural rays of the sun for promotion of acidity in the intestinal tract won him fame throughout his profession. In addition to these research projects, Dr. Tisdall devoted much time to the health of the Indians in the Canadian north. In 1930, Drs. Tisdall, Drake and Brown published an article in the *American Journal of Diseases in Children* entitled "A New Cereal Mixture Containing Vitamins and Mineral Elements". This modest sounding title was actually the first official announcement of Pablum.

Ministry of Health Grants Assist Three Areas of Faculty Research

Three areas of Faculty research recently received a substantial boost from Ontario's Ministry of Health in the form of grants totalling $13.5 million.

"The province has had a good revenue year. When that happens we take the opportunity to help as much as we can. We've made large sums available for atypical projects in the past, such as the establishment of the Banting and Best Institute," says Pat Stuckless, Manager, Research and Planning for the Ministry.

A grant of $7.5 million was made available to the University for the purchase of a Positron Emission Tomography scanner (PET scanner). These funds will also be used to renovate space to house the unit at The Clarke Institute of Psychiatry. A sum of $4.5 million was given to establish the Eye Research Institute of Ontario — a cooperative effort between the Faculty of Medicine and the Toronto Hospital Corporation. And, $1.5 million was granted to the Department of Microbiology to set up a human immunodeficiency virus isolation laboratory in the Fitz-Gerald Building for research into the diagnosis and treatment of AIDS.

"These were particularly large awards," says Beth Boswell, Communications Assistant for the Minister of Health. "All three were awarded through the normal granting process. But we moved quickly on funding the immunodeficiency virus isolation facility because the number of people with AIDS is increasing so quickly. It is important because we don't yet have an AIDS vaccine. With the PET scanner, we want to find out exactly what the capabilities of this technology are, we moved quickly there as well."

Pat Stuckless was unable to predict whether 1988 would be another good revenue year for this province or how much support these projects can expect in the future. "For example, there has been very little eye research in the province, and it has always been recognized as a weakness. The money has been given to get a facility going. Once the program has been built, the Institute can begin to attract other money and build an endowment fund," said Ms Stuckless.

Eye Research Institute

"With the recent grant of $4.5 million from the province, we have a marvellous opportunity to move to the top rank of eye research institutes. The new centre will give us a focus," says Dr. Martin Hollenberg, the Faculty's newly-appointed Associate Dean of Research.

For more than 25 years, Faculty ophthalmologists have talked of establishing a centrally located Eye Research Institute where researchers and clinicians could work together. That has become the goal for the Eye Research Institute of Ontario.

"When I was a resident at Johns Hopkins University, I was told by a great scientist that the future lies in doctors in dialogue with scientists. And that's the atmosphere I'm trying to create at the

Institute," says Dr. William Callahan, Chairman of the Eye Research Institute and Professor of Ophthalmology.

"...the future lies with doctors in dialogue with scientists. And that's the atmosphere I'm trying to create ..."

Dr. Callahan plans to make sure an atmosphere conducive to dialogue between scientists and clinicians pervades all the Institute's facilities, including the library.

"Recently, we got another marvellous gift. Imperial Optical is going to build us a library. Again, my theme for the library will be to bring young residents and eye doctors interested in academia in dialogue. The whole purpose is to get scientists to inspire these young people that science is every bit as good as operating."

As a cooperative project between the Faculty and the Toronto Hospital (the amalgamated Toronto General Hospital and Toronto Western Hospital), the Institute will occupy 30,000 square feet at the Toronto Western Hospital, while all its members will hold University appointments.

"I will do everything I can to help coordinate the Institute's work with the research going on in the University and to make sure it is of the highest academic standard. This has to be a top flight research institute," says Dr. Hollenberg.

Dr. Callahan and Dr. Hollenberg stressed that they can say little about the future direction of the Eye Institute. The major task facing the board right now is the search for a scientific director. The future of the centre, its emphasis in research and its goals will depend on its director. However, they expect that 75 to 80 percent of the Institute's activity will concentrate on basic science.

Dr. Callahan also believes there will be a strong tendency toward oncological study and toward diseases of the retina.

In fact, Dr. Hollenberg is already actively investigating factors that influence retinal regeneration.

"It is known that in some animals, the retina can regenerate throughout life. In newts for example. In other animals, this capacity is present in the embryo, but is lost as the retina differentiates. What we are doing is working with chick embryos where we know the retina will regenerate very quickly in embryonic life. We are attempting to find out how long this capacity is retained and to see if we can lengthen that period by altering the conditions inside the eye, for example, by the use of certain growth factors."

Dr. Hollenberg says that through work such as his own, the potential to make blind people see exists, but "it is a whole black box right now. But the fact that regeneration can occur in vertebrates is a hopeful sign and it makes it worthwhile to find out more."

"We're really excited because we've been able to get the retina to regenerate in four day old chicks. By operating on the eyes while the chick is still in the egg, we remove the retina and let the chick continue to develop. The retina is then reconnected to the brain. We have a 50 percent survival rate — and, we have a model. Once you have a model, there are all kinds of things you can do with it."

PET Scanner

"The PET scanner is an exciting tool to use because it allows you to look at processes, such as the nature of biochemical disturbances in

psychiatry," says Dr. Jerry Warsh, at The Clarke Institute of Psychiatry. "You can pick up biochemical events that occur simultaneously in the brain and then determine where they happened in the tissue."

Positron-emission tomography is an imaging device which allows researchers to look at biochemical and physiological processes in the brains of living people. Until PET was invented over ten years ago, scientists were forced to rely on postmortems, animal studies and indirect body fluid analysis to understand how the brain works. Using PET, scientists expect to be able to confirm and extend knowledge about normal brain function as well as diseases such as the dementias, addiction, schizophrenia, and other diseases such as Alzheimer's and Huntington's, as well as the mechanisms of action in psychotropic drugs.

"The study of dementias is an important application for PET. Receptor imaging and

other metabolic imaging will be important for research in depression and schizophrenia. Some techniques will apply to other disorders such as anxiety. There will also be ongoing research on biological factors in violent behaviour and disorders of impulse control. A lot of soft research has been done on the biological link-ups between these disorders, and we have been waiting for techniques to get at the underlying pathology. There are other areas we would like to study but that are very difficult to investigate because of the ethical problems, such as child psychology; autism and hyperactivity disorders.

"It is going to mean a big team approach with many personalities involved, which reflects the way science is going ..."

"The PET scanner will be a university instrument to be used by scientists in psychiatry, neurology, pharmacology, and other disciplines. It is intended for the University community, but depending on the decisions of the steering committee, I do not have difficulty seeing it being shared with researchers from other universities as well."

The Montreal Neurological Institute was the first active research centre in Canada to have a PET scanner. The University of British Columbia and McMaster University also have this technology.

"This device is going to produce good work. It is going to mean a big team approach with many personalities involved, which reflects the way science is going. The multidisciplinary approach is a major trend we are seeing in the molecular biological explosion, for example. And, to get the most for the dollar out of this project we have to have good basic science support. Without strong basic science the University of Toronto will follow instead of lead. There are a number of people here with that basic science expertise. An extended team will really make this device have an impact."

It will take several years to design, buy and put this technology into place at The Clarke. "It is premature to put forward actual, formal research submissions. But the committee is setting up guidelines for reviewing proposals and this process will get going by Christmas," says Warsh.

AIDS Laboratory

The plans for Ontario's first human immunodeficiency virus isolation laboratory reflect the current concentration in AIDS research on finding effective antiviral therapy to stop or slow the spread of the HIV virus. Researchers will look at intervention studies on antiviral drugs. But they will also try to isolate the AIDS virus so that they will know which drugs suppress it or under what conditions it changes. In the long run they hope to discover a vaccine.

Dr. Stan Read of the Department of Paediatrics and Dr. Mary Fanning of the Department of Medicine are coordinating the initial establishment of the laboratory. They predict it will take up to nine months to renovate 2,600 square feet in the FitzGerald Building, buy and install the necessary equipment such as biological safety cabins and laminar-flow hoods for workers, and hire a director with expertise in retroviruses. In that time, they will define what is needed in terms of safety based on current knowledge of the virus. "We do not want to be splashing the virus around and exposing people unduly to chance," says Dr. Read.

The coordinators are in the throes of dealings with planners, architects and others at the University of Toronto, designing the facility. "We need part of the space to be allocated as a certain level of biocontainment. The highest level of containment will be an area completely sealed so that air flows in instead of out of the area, and in which the exhaust air is filtered," says Dr. Read.

The design of the lab will accommodate two technicians and a director at first, but have more space to expand as the interest and funds increase. ■

Awards

■ The recipients of the third annual, W.T. Aikins Awards for Excellence in Undergraduate Medical Teaching, were announced recently. The awards, named for the Faculty's first Dean of Medicine, are designed to recognize excellence in individual teaching performance, with an emphasis on innovation and development in education. This year's winners are:

■ **Dr. John Provan**, Professor of Surgery and Surgeon-in-Chief at the Wellesley Hospital. He received a B.Sc. (Anatomy) Honour Degree at the University of London in 1953, followed by a M.B., B.S. at that university, and his fellowship in the Royal College of Surgery in England in 1961. He earned a Master of Surgery Degree (1968) for a thesis in Myocardial Ischaemia. In Canada, he was awarded a F.R.C.S.(C) and a F.A.C.S. in 1973.

This year's Aikins Award for Excellence in Undergraduate Medical Teaching Course Department and Coordinator was the latest of many awards he has received for scholarly work and teaching.

Dr. Provan assumed the role of Chairman of the Undergraduate Education Committee for the Department of Surgery, and thus the position of Director of Undergraduate Education, in 1973. Since then, as a result of his leadership, enthusiasm, innovation and commitment to undergraduate education, he has succeeded in raising the profile of undergraduate education in the Department of Surgery. The changes implemented by Dr. Provan have had a major impact on the quality of surgical education in the undergraduate curriculum, and the Department of Surgery has played a leading role in this respect in the Faculty.

Under Dr. Provan's leadership, the Department of Surgery has given recognition to the importance of undergraduate teaching in Surgery, and has initiated Faculty development programs to improve teaching skill. The Department has also implemented an effective system of program and teacher evaluation; standardized teaching methods and content throughout all hospital-based Departments of Surgery; and re-evaluated the examination process for surgical clinical clerkships. Dr. Provan has also made a concentrated effort to increase the number of elective and selective programs in the Department, and in fact, Surgery now offers the greatest number of electives of any faculty department.

■ **Drs. Paul H. McCleary** and **R. Michael Shler**, of the Department of Obstetrics and Gynaecology, were joint winners of this year's Aikins Award for Excellence in Undergraduate Teaching Course Development and Coordination.

Dr. McCleary received a B.A. from the University of Western Ontario, London in 1958 and his M.D. from that university in 1962. His F.R.C.S. (C) was awarded in 1968. He did his postgraduate training at Western and at Cornell Medical Centre in New York. Dr. Shler is a B.Sc.

graduate of Victoria College, University of Toronto. His M.D. was awarded in 1968 and he became a F.R.C.S. (C) in 1973. Most of his professional career has been at the Wellesley Hospital.

Drs. McCleary and Shier are co-chairmen of the Undergraduate Committee of the Department of Obstetrics and Gynaecology, with Dr. McCleary assuming the major responsibility for Year III teaching and Dr. Shier for the Clerkship. Both of these individuals have made outstanding contributions to the Undergraduate Program and have been particularly creative in the development of curriculum evaluation of students and feedback mechanisms for the students' evaluation of the program and its teachers.

Among their accomplishments and underlying their Aikins Award are: the development of an audio-visual tape library for clerks established in the delivery suites of all teaching hospitals; the creation of one of Canada's first professional surrogate patient programs; the production of educational objectives for Year III and IV; the publication and distribution of "Core Studies and Clinical Log in Obstetrics and Gynaecology," which outlines core knowledge requirements for both teachers and students; and the implementation of a new undergraduate program at St. Joseph's Health Centre to replace the program at the Toronto Western Hospital.

Drs. McCleary and Shier have achieved a national reputation for innovative teaching methods for use in their department, and have been invited to present their work to the Association of Professors of Obstetrics and Gynaecology.

■ **Dr. Uwe Ackermann** earned his degree in Electrical Engineering from the U. of T. in 1966, his M.A. degree in biomedical engineering in 1968, and a Ph.D. from this university in 1973 in the combined disciplines of physiology and biomedical engineering. In 1973, he joined the Medical Faculty of Memorial University in Newfoundland as an assistant professor of physiology. In 1976 he returned to U. of T. as an assistant professor of physiology. He currently holds the rank of associate professor in the Department of Physiology, the Institute of Biomedical Engineering and the Division for Studies in Medical Education.

As well as pursuing a very successful research career in cardiac physiology, Dr. Ackermann is recognized by his students and colleagues as a truly outstanding teacher in our faculty. From 1976 to 1984, Dr. Ackermann was a course coordinator for the medical undergraduate physiology course. During that time he developed major innovations in teaching methods for the undergraduate physiology course. Dr. Ackermann introduced "scenario-based" teaching to help students better understand the complexities and subtleties of human physiology. He himself accepted a major share of the lectures and seminars in this undergraduate course.

Dr. Ackermann's students have praised his lectures and seminar presentations as models of organization, presentation and illustration that should be followed by all undergraduate lecturers in the faculty. Dr. Ackermann is reputed to be one of the few lecturers who can be dramatic enough in his presentation to maintain the interest of students, dulled by hours of lectures, without sacrificing scholarship. It is a measure of Dr. Ackermann's success as a lecturer and seminar leader that his lectures are regularly attended by faculty colleagues, "for the pure pleasure of watching a master of the craft." Dr. Ackermann also has made significant contributions to the administration of the undergraduate medical curriculum. For some years, he has been a member of the Undergraduate Medical Curriculum Committee of the faculty. Since 1983, he has been chairman of the Undergraduate Examinations and Student Evaluations subcommittee. Since 1981 he has been supervisor of the Faculty's Undergraduate Medical Electives Program.

In addition to his formal teaching commitments, Dr. Ackermann has demonstrated a unique personal rapport with his medical students. His student nominators praised his inherent sincerity and genuine concern for student well-being. This is not the first time Dr. Ackermann has been recognized for his teaching excellence. In 1984, after province-wide solicitation, he was awarded the prestigious 3-M Award for Teaching Excellence in Health Sciences.

■ **Dr. Harry Himal** received his B.A. from McGill University in 1959 and his M.D. from the University of Ottawa Medical School in 1963. After internship at the Toronto General Hospital, Dr. Himal pursued his training in General Surgery at McGill University from 1964-69. From 1969-71, Dr. Himal was a research fellow in Surgery at the Mount Sinai School of Medicine supported by a McLaughlin fellowship. In 1971, he returned to the Royal Victoria Hospital in Montreal as a staff surgeon and a faculty member at McGill University. In 1980, Dr. Himal joined the staff of the Toronto Western Hospital and the Faculty of Medicine at U. of T.

Throughout his academic career, Dr. Himal has always been much involved in undergraduate surgical education. He has been a popular supervisor of numerous medical student elective courses. His class lectures on topics in General Surgery and endoscopy have been extremely well reviewed and he has been a member of numerous hospital and university undergraduate medical education committees.

It is, however, in the area of individual bedside teaching that the Awards Committee wishes to recognize Dr. Himal's unique contribution to undergraduate medical education at this university. Dr. Himal's student nominators pointed out that he went out of his way to introduce his students to "their patient" as one of his surgical team. Dr. Himal developed an innovative third year surgical experience that allowed his students to feel very much part of the health care system rather than simply observing. His students were involved not only in history taking and physical examination but also followed their patients into the operating room or the endoscopy suite. Dr. Himal made special arrangements whereby third year students could follow their patients with him on a long-term basis in office and out-patient clinics. His students speak glowingly of his sensitive bedside teaching manner and his stimulating and challenging approach to bedside clinical decision making. Dr. Himal's energy, enthusiasm and innovative approaches to bedside teaching have obviously made a lasting impression on his students.

■ **Mary Chipman** received her M.A. in Statistics from the U. of T. School of Graduate Studies in 1985. She joined the Department of Preventive Medicine in the Faculty of Medicine at Dalhousie University in 1967 as a lecturer and researcher in Biostatistics. She returned to her "alma mater," the U. of T., in the Faculty of Medicine in 1972. She currently holds the rank of Associate Professor in the Department of Preventive Medicine and Biostatistics. In addition to her career commitments to medical biostatistic research in such diverse fields as traffic safety, corneal graft survival and pregnancy loss, Ms Chipman has made a significant contribution to the undergraduate medical curriculum of this university.

The W.T. Aikins Award Committee wished to recognize Ms. Chipman for her role in the inception, planning and implementation of a Year I course selective entitled "The Patient in the Community". This highly innovative course provided a unique opportunity for students to learn, by household interviews with patients and their families, about the impact of diseases in a community setting. Such direct patient related experience is rare in Canadian undergraduate medical education for learning usually takes place in a very "institutional" environment.

This elective course was made possible because of a special relationship developed by Ms Chipman with the Borough of East York Public Health Unit. This close cooperation with the community health unit represents a unique initiative by a faculty member to exploit the teaching potential of community-based public health workers.

tablet talk

In the course of conducting their surveys, the students not only interviewed patients and their families but also municipal politicians, social workers and even police officers. The students who took this selective course appreciated both the opportunity to interview families in the community setting and the demonstration of how public health surveys, epidemiological methods and statistics are used to survey the overall health of the community.

■ In May, the Royal Society of Canada elected ten distinguished members of the University's Faculty to membership; among which were **Dr. Aser Rothstein**, former director of the Research Institute at the Hospital for Sick Children, and **Dr. Charles Hollenberg**, Vice-Provost, Health Sciences.

■ **Dr. John Hastings** of the Department of Health Administration was recently awarded the Pan American Health Association (PAHO) Award for Administration. The award was established by PAHO in 1969 in recognition of individuals who have made an outstanding contribution to the field of administration in national health services. The only previous Canadian winner was Dr. Burns Roth.

■ **Dr. E.M. Sellers**, Associate Dean, Academic Affairs and Professor in the Department of Pharmacology will receive the 1988 Rawls-Palmer Award for Progress in Medicine from the American Society for Clinical Pharmacology and Therapeutics in March. The award was given in recognition of Dr. Sellers work in improving the treatment of drug and alcohol withdrawal; discovery of drugs to increase alcohol consumption in humans; and demonstration of the clinical importance of bezodiazepine dependence

■ The first annual Harry Whittaker Awards were recently presented by the students of the Second Year Medical Class. The Awards, which were created through the fundraising efforts of the Class of 878 (the last to be taught by Harry Whittaker), are given to two First Year Medical Students and to a lecturer, demonstrator or tutor involved with teaching the First Year class. The winners of these awards were selected for their dedication to medical education and empathy for students — qualities which marked Harry Whittaker's 53 year teaching career.

This year's Faculty winners were:

Dr. Ian Taylor
Department of Anatomy
Award for Primary Lecturer

Anne Agur
Department of Rehabilitation Medicine
Award for Small Group Teaching

Appointments

■ **Dr. Tim Murray**, professor in the Department of Medicine and director of the calcium research laboratory at St. Michael's Hospital, has been appointed director of the University's Bone and Mineral Group. Murray plans to extend the group's role in research and education and to develop an endowment fund for long-term support for group initiatives.

■ **Dr. Charles Hollenberg** has been reappointed to another two-year term as the University's Vice-Provost of Health Sciences.

■ **Dr. Jim Friesen**, Chairman of the Department of Medical Genetics, has been appointed to the directorship of the Research Institute at the Hospital for Sick Children.

■ **Dr. Arnold Aberman**, Professor in the Department of Medicine at Mount Sinai Hospital, has been appointed Associate Dean for Fiscal Affairs.

■ **Dr. Martin Hollenberg**, Chairman of the Department of Anatomy, has been appointed Associate Dean, Research.

■ **Dr. R. Volpe**, Professor in the Department of Medicine, has been appointed Chairman of the Faculty's Centenary Committee.

■ **Ms. Roz Bugala** has been appointed Planning Officer in the Office of Research.

■ **Ms. Martha Lonsdale** has been appointed Administrative Coordinator for Postgraduate Medical Education.

■ **Dr. Eliot Phillipson**, Department of Medicine, has been appointed Physician-in-Chief at Mount Sinai Hospital.

■ **Mr. Louis Charpentier** has been appointed as Assistant in the Planning Directorate. As such, he will provide support in the Faculty's planning and policy development activites. He holds a B.Sc. from U. of T. and an M.B.A. from York University. He has worked in the Faculty for the past eight years as a research technician in the Departments of Medical Genetics and Immunology.

Announcements

■ The Faculty would like to thank each of the following people for their years of service in the various departments, and wish them well on their retirements: **Dr. H. Bean**, Radiology; **Professor R. Bradshaw**, Rehabilitation Medicine; **Mrs. C. Cameron**, Rehabilitation Medicine; **Professor E. Cape**, Behavioural Science; **Mrs. C. Cates**, Rehabilitation Medicine; **Dr. L.M. Cathcart**, Family and Community Medicine; **Dr. C.W. Dix**, Anaesthesia; **Professor F. Faris**, Rehabilitation Medicine; **Dr. J. Findlay**, Medicine; **Dr. T. Geieff**, Family and Community Medicine; **Dr. L. Genesove**, Family and Community Medicine; **Dr. W. Goodman**, Otolaryngology; **Dr. F. Grayson**, Paediatrics; **Dr. R. Hines**, Family and Community Medicine; **Professor J.H. Joy**, Art as Applied to Medicine; **Mrs. L. Eijas**, Anatomy; **Mrs. M.E. Hutchinson**, Obstetrics and Gynaecology; **Mrs. A.M. Jamieson**, Biomedical Engineering; **Mrs. V. Konnerth**, Dean's Office; **Mrs. D. Olsen**, Family and Community Medicine.

■ An Alzheimer's Disease Research Group has been established in Toronto to facilitate the cooperation of workers involved in Alzheimer's Disease Reseach. Two initial objectives are to establish a registry for individuals with familial Alzheimer's disease, and to create a working group to establish uniform clinical outcome protocols for chemotherapy studies. For further information please phone **Dr. H. Karlinsky** at 595-3747.

■ Canadian and Thai universities have established a collaborative project for biotechnology transfer between the two countries with funding from the Canadian International Development Agency (CIDA). The biotechnology transfer program begins this fall.

The biotechnology techniques will be suitable for application to plant breeding and plant selection, as well as in veterinary medicine in Thailand, says **Dr. Bernhard Cinader** of the University of Toronto who coordinates the project with Dr. Thomas Wegmann of the University of Alberta.

With almost half a million dollars from CIDA, the project will be able to meet its three main objectives:

- to increase the capability of Thai universities in modern biotechnology methods leading to the development and production of immunological reagents;
- to enable the production of commonly used reagents for the diagnosis and control of major animal diseases in Thailand;
- to develop new, simple diagnostic test kits that can readily be used in farms and field stations.

Cinader and Wegmann say that a number of Canadian biotechnology firms have been invited to offer products for licensing in Thailand. They hope that profits from Thai-Canadian joint business ventures will be used to expand the amount of money available for training.

■ The Faculty has been saddened by the deaths of: **Dr. Chi-tao Chou**, Research Associate in the Department of Immunology in April, and of **Dr. Bill Lewis**, Department of Microbiology in September.

(From left) Dr. Jose Jimenez, Project Coordinator, INCIENSA, Dr. M. Flores, Director General, INCIENSA, and Dr. Aubie Angel, Director of the Institute of Medical Science.

■ Several years ago, a Costa Rican medical researcher, Dr. Jose Jimenez, came to Toronto to study the effects of diabetes and obesity on coronary heart disease with Dr. Aubie Angel, who is now Director of the Institute of Medical Science. That relationship proved so successful, that the University of Toronto and the Instituto Costarricense de Investigacion y Ensenanza en Nutricion y Salud in Costa Rica recently entered into a formal agreement that will enable other Costa Rican researchers to come to study in Toronto.

The project, funded by CIDA, is also designed to assist in establishing research facilities in Costa Rica and to advance the country's health care programs in general. Primary responsibility for the program will lie with the Banting and Best Diabetes Centre and the Institute of Medical Science. ▬

■ The search for Medical Class Pictures continues. If you are aware of a medical class photograph from the 1870s through the 1970s that is available for donation to the Faculty or that could be borrowed for duplication, please contact: TABLET, Room 2388A, Medical Sciences Building, University of Toronto, M5S 1A8.

We also express our thanks to the following people who contacted the Faculty regarding class photos: **Dr. H. Godrey Bird, Miss C.E. Gunn, Mrs. Ken Jarvis, Dr. Bill Little, Dr. Ross Robertson** and **Dr. Willard Sehl.**

University of Toronto Women's Association

The University of Toronto's Women's Association invite all Faculty and Administrative staff and their families to the following special events.

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February 24, 1988
Bridge Evening
93 Highland Avenue

****

March 26, 1988

U. of T. Jazz Ensemble
Edward Johnson Building
7:00 Refreshments
8:00 Concert

****

April 7, 1988
Luncheon and General Meeting
93 Highland Avenue
12 Noon

****

June
Convocation Rose Sale

Continuing Education Courses

Continuing Education Courses
January to May 1988

Date/Location	Title/Fee	Of Interest To:
January 22-23, 1988 and April 15-16, 1988 Medical Sciences Bldg.	Writing for Medical Journals $250/$160	All Faculty
January 30, 1988 February 27, 1988 March 26, 1988 Medical Sciences Bldg., U of T	Saturday at the University A review of major medical topics offered on six Saturdays. Fees vary according to number of sessions selected.	Family Physicians
January 30, 1988 Toronto Hilton	International Symposium on Pharmacologic Treatment of Ventricular Arrhythmias	Internists and Cardiologists
February 1-5, 1988 Banff Springs Hotel Banff, Alberta	Annual Update in Emergency Medicine $525	Emergency Physicians
February 4-5, 1988 Toronto General Hospital	Update '88 for Family Physicians	Family Physicians
February 8, 1988 Mt. Sinai Hospital	AIDS and Psychiatry: Clinical Issues $90	Psychiatrists and Allied Health Professionals
February 12, 1988 St. Michael's Hospital	Diagnosis and Clinical Management of Voice Disorders in Children and Adults $125	Otolaryngologists, Speech Pathologists
February 12 or 19, 1988 Bell Trinity Square	Online Databases for Health Professionals $150 (one-day course repeated)	Family Physicians, Specialists, other Health Professionals interested in personal use of online databases.
February 24, 1988 Mt. Sinai Hospital	Urogynaecology, Urodynamics and Female Incontinence $25	Obstetricians and Gynaecologists, Family Physicians
February 26, 1988 Holiday Inn — Downtown	Infectious Diseases Update $110	Family Physicians
March 14-18, 1988 Delta Mountain Inn Whistler, B.C.	Otolaryngology — Head and Neck Surgery Update 1988 $525	Otolaryngologists
April 8, 1988 The Old Mill	Diagnosis and Management of Respiratory Disease $90	Family Physicians
April 8, 1988 St. Michael's Hospital	Upper Extremity Update $100	Orthopaedic Surgeons, Neurosurgeons, Plastic Surgeons, Physical Therapists
April 11-12, 1988 Hospital for Sick Children	Paediatric Resuscitation $250	Paediatricians, Emergency Physicians
April 13-15, 1988 Hospital for Sick Children	Paediatric Update	Family Physicians, Paediatricians
April 16, 1988 Hospital for Sick Children	Neonatal Emergencies	Paediatricians
April 22, 1988 L'Hotel	Symposium on Trauma Research	General Surgeons, Pathologists, Internists, Emergency Physicians, Physiologists
April 25-27, 1988 Toronto General Hospital	28th Annual Refresher Course for General Surgeons	General Surgeons
April 27, 1988 Holiday Inn - Downtown	Drug Update for Family Physicians $100	Family Physicians
April 28-29, 1988 Hospital for Sick Children	Topics in Paediatric Endocrinology $200	Paediatricians, Endocrinologists
April 29-30, 1988 Medical Sciences Bldg., U of T	Audiology and Otology Update for the Primary Care Physician	Family Physicians
May 4-7, 1988 Medical Sciences Bldg., U of T	The 2nd Pelvic & Acetabular Fracture Management Course $895	Orthopaedic Surgeons
May 4, 1988 Toronto General Hospital	Management Choices in Hypertension $25	Family Physicians, Internists
May 6-7, 1988 Chelsea Inn	Anaesthesia in Community Hospitals	Family Physicians
May 13-14, 1988 L'Hotel	Toronto Neurology Update	Neurologists
May 19-20, 1988 Mt. Sinai Hospital	Allografts in Orthopaedic Surgery	Orthopaedic Surgeons

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